

## APPLICATIONS FOR ADMISSION AND FOR TRANSFER

The Constitution provides that the Board of Direction shall elect or reject all applicants for *Admission* or for *Transfer*, and, in order to determine justly the eligibility of each candidate, the Board must depend largely upon the Membership for information.

This list is issued to members in every grade for the purpose of securing all such available information, and every member is urged to scan carefully each monthly list of candidates and to furnish the Board with data in regard to any applicant which may aid in determining his eligibility. It is the *Duty* of all *Members* to the *Profession* to assist the Board in this manner.

It is especially urged, in communications concerning applicants, that errors in the record be pointed out and a *Definite Recommendation as to the Proper Grading in Each Case* be given, inasmuch as the grading must be based upon the opinions of those who know the applicant personally, as well as upon the nature and extent of his professional experience. If facts exist derogatory to the personal character or to the professional reputation of an applicant, they should be promptly communicated to the Board. *Communications Relating to Applicants are considered by the Board as Strictly Confidential.*

The Board of Direction will not consider the applications herein contained from residents of North America until the expiration of thirty (30) days, and from non-residents of North America until the expiration of ninety (90) days from April 15, 1931.

### MINIMUM REQUIREMENTS FOR ADMISSION

Grade	General Requirement	Age	Length of Active Practice	Responsible charge of work
Member	Qualified to design as well as to direct work	35 years	12 years*	5 years
Associate Member	Qualified to direct work	27 years	8 years*	1 year
Junior	Qualified for sub-professional work	20 years†	4 years*	
Affiliate	Qualified by scientific acquirements or practical experience to co-operate with engineers	35 years	12 years*	5 years
Fellow	Contributor to the permanent funds of the Society			

\* Graduation from a school of engineering of recognized reputation is equivalent to 4 years active practice.

† Membership ceases at age of 33 unless transferred to higher grade.

APPLICATIONS FOR ADMISSION AND FOR TRANSFER

LIST OF APPLICANTS.

Names and Addresses of Applicants for Admission and for Transfer on this List, Arranged Alphabetically.

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The fact that applicants give the names of certain members as references does not necessarily mean that such members endorse.

The number in the center above each record indicates the serial number of the applicant for the current year, and that at the left the district in which he resides.

The abbreviations in *Italics* represent, respectively, *TT*, Total Time; *SP*, Sub-Professional Work; *P*, Professional Work; *RC*, Responsible Charge; *D*, Design. The figure for Total Time is determined by adding one-half the time spent in Sub-Professional Work to the time spent in Professional Work. The figures showing the amount of time spent in Responsible Charge and on Design are the estimate of the Applicant. The allowance of four years for graduation or of one-half of a year for each academic year successfully completed in an engineering college without graduation is included in Total Time and Professional Work.

## FOR ADMISSION

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(16) **ADKINS, ARCHIBALD WILLIAM**, University Club, Denver, Colo. (Age 25. Born Washington, D. C.) 1927 A. B., Univ. of Pa. 1929 S. B., Mass. Inst. Tech. *TT* 4: *P* 4.—Aug. 1929 to May 1930 Surveyman, and May to Sept. 1930 Jun. Engr., U. S. Engr. Service, on hydraulic engineering for locks and dams. *TT* 1: *SP* 0.2: *P* 0.8.—Sept. 1930 to date Jun. Engr., Bureau of Reclamation, Denver, Colo., on hydraulic engineering for Hoover Dam. *TT* 0.5: *P* 0.5.—*TT* 5.5: *SP* 0.2: *P* 5.3. Refers to I. E. Houk, C. M. Spofford.

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(5) **ANDERSON, ARCHIBALD LAMON**, Falls Church, Va. (Age 52. Born Ballston Spa, N. Y.) 1900 Ph. B., Union Coll. and 1900 to 1903 student in Civ. Eng., same Coll. *TT* 3.5: *P* 3.5.—April 1903 to Sept. 1904 Statistician and Jun. Engr., St. Louis World's Fair, compiling statistics and cost data and Asst. Engr. in charge of construction of steel boiler house and boiler plant. *TT* 1.1: *SP* 0.3: *P* 0.8: *RC* 0.4.—Oct. 1904 to Dec. 1909 with St. Louis Water Dept., as Draftsman and Asst. Engr. in charge of maintenance of distribution system, design of pipe lines and coagulating plant, and Engr. in charge of construction. *TT* 5.1: *SP* 0.1: *P* 5: *RC* 3: *D* 1.—March 1910 to May 1918 with St. Louis Terminal R. R. Association, as Draftsman and Asst. Engr. on construction and maintenance, steel bridge design, Engr. on reinforced concrete construction, railroad valuation. *TT* 7.5: *SP* 0.4: *P* 7.1: *RC* 4: *D* 1.2.—May 1918 to date Senior Civ. Engr., Constr. Div., War Dept., Office of Quartermaster General, in charge of road and railroad layout, surveys, civil engineering, including (past 6 years) hydraulics and sanitation. *TT* 12.9: *P* 12.9: *RC* 12.9: *D* 8.—*TT* 30.1: *SP* 0.9: *P* 29.2: *RC* 20.2: *D* 10.2. Refers to R. E. Adams, C. E. Alderman, L. S. Doten, W. A. Swallow, F. J. Trumpour, W. D. Wrightson.

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(3) **BARRON, MAURICE**, 15 South Ave., Ithaca, N. Y. (Age 22. Born Tarrytown, N. Y.) 1930 B. S. in C. E., Cooper Union Inst. Tech. *TT* 4: *P* 4.—At present graduate student, Cornell Univ.—*TT* 4: *P* 4. Refers to E. N. Burrows, H. R. Codwise, F. E. Foss, R. Y. Thatcher, L. C. Urquhart.

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(10) **BARROW, ASA CARRINGTON**, Box 2276, Auburn, Ala. (Age 54. Born Clark County, Ky.) 1908 C. E. (Hon.), and 1927 A. B., Kentucky Wesleyan Coll.—June 1897 to Sept. 1901 surveying in Clark and adjoining counties in Kentucky. *TT* 1: *P* 1: *RC* 1.—Sept. 1901 to June 1905 Asst. and Chf. Engr., Kentucky Lumber & Veneer Co., on location, construction and operation of 20 miles of railroad; also June 1903 to June 1904 (part of time) City Engr., Town of Jackson, Ky., and Commr. for Breathitt County, prepared plans and specifications for macadamizing streets and for sewers, water supply and two small highway bridges. *TT* 3.5: *P* 3.5: *RC* 3: *D* 3.—Sept. to Nov. 1905 Transitman, C. N. O. & T. P. R. R. (Cincinnati Southern), on survey in Pulaski County, Ky. *TT* 0.1: *SP* 0.1.—Nov. 1905 to May 1906 Levelman on survey and construction, Kentucky and Tennessee R. R., Stearns, Ky. *TT* 0.3: *SP* 0.3.—Sept. to Nov. 1906 with Southern Traction Co., in charge of party on railroad location out of Carbondale, Ill. *TT* 0.2: *P* 0.2: *RC* 0.2.—April to

Aug. 1907 in charge of relocation and construction of one-mile of narrow-gauge railroad for Mountain Central R. R., Wolf County, Ky. *TT 0.4: P 0.4: RC 0.4: D 0.4.*—1907 to 1926 farming.—1926 to 1927 student.—Sept. 1927 to Sept. 1928 Instructor in, and Sept. 1928 to date Asst. Prof. of, Civ. Eng., Alabama Polytechnic Institute, Auburn, Ala., teaching structural design, and foundations, water-supply, sewerage, etc. *TT 3.5: P 3.5: RC 2.5: D 2.5.*—*TT 9: SP 0.4: P 3.6: RC 7.1: D 5.9.* Refers to C. A. Baughman, J. A. C. Callan, H. H. Houk, R. D. Jordan, G. N. Mitcham, M. D. Ross.

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(1) BAUM, OWEN HORATIO, 17 Smallwood Ave., Belleville, N. J. (Age 36. Born Richville, N. Y.) Prof. Engr. and Land Surveyor, State of New York.—April 1915 to Feb. 1916 Rodman, New York State Highway Dept., on surveys and inspection. *TT 0.4: P 0.4.*—Feb. 1916 to Oct. 1918 Jun. Engr., Public Service Comm., 1st Dist., East River Tunnels, compressed air work, New York City, being Instrumentman, Chf. of Party and Inspector on Montague, Whitehall and N. Seventh Street Tunnels. *TT 1.3: SP 1.3.*—Oct. 1918 to Jan. 1920 with Westinghouse, Church, Kerr & Co. (Dwight P. Robinson & Co.), New York City as Chf. of Party on industrial construction at Indian Head, Md., and Job Engr. on Peekskill building construction. *TT 0.9: SP 0.3: P 0.6: RC 0.6: D 0.2.*—Jan. to June 1920 student, New York Univ.—Sept. 1920 to Sept. 1921 Maintenance Engr., E. W. Bliss Co., Brooklyn, N. Y., inspecting plant, recommending alterations, studies for improvements, test and inspection of construction. *TT 0.5: SP 0.5.*—Sept. 1921 to March 1922 Job Engr. and Clerk, Levering and Garrigues Co., New York City, lines and grades, unit costs, estimates, time-keeping, etc., on building construction. *TT 0.3: SP 0.3.*—March 1922 to July 1923 Estimator, G. C. & A. E. Wheeler, Civ. Engrs. and City Surveyors, New York City, monthly estimates, building work, roadwork, excavation, private developments. *TT 0.6: P 0.6.*—July 1923 to July 1925 Asst. Engr., Board of Estimate and Apportionment, City of New York, being Asst. to Field Engr. on surveys for Brooklyn-Richmond Freight and Passenger Tunnels, Staten Island. *TT 1: SP 1.*—July 1925 to Jan. 1926 member of firm, Borg & Roller, Engrs. and Constrs., on residence construction, Miami Beach, Fla. *TT 0.3: P 0.3: RC 0.3.*—Jan. 1926 to Jan. 1928 Asst. City Engr., Daytona Beach, Fla., on surveys, computations, design, maps and construction on five projects, new streets, repaving, widening, sewers, white ways, water-works, buildings, board walk, retaining walls, etc. *TT 2: P 2: RC 1.5: D 1.*—May 1928 to April 1929 Res. Engr., Arthur Noack, Inc., Hackensack, N. J., in charge of surveys and construction, municipal and private, Cities of Saddle River, East Paterson, Garfield and Lodi Township. *TT 0.9: P 0.9: RC 0.9.*—April 1929 to date Engr. of Special Assignments, Transit Bureau, City of Newark, N. J., in charge of surveys, city railway project and Asst. to Res. Engr., in charge of construction on Secs. 4 and 5. *TT 2: P 2: RC 2.*—*TT 10.2: SP 4.4: P 5.8: RC 5.3: D 1.2.* Refers to D. W. Coe, C. L. Crandall, T. C. Desmond, T. Grahman, A. H. Jorgensen, E. Welle.

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(12) BERRY, CARL MORRISON, P. O. Box 576, Tacoma, Wash. (Age 27. Born Tacoma, Wash.) Jan. to March of years 1922 and 1923 and Oct. 1925 to May 1926 student, Univ. of Washington. *TT 0.5: P 0.5.*—Aug. 1919 to July 1920 Chairman and Rodman, Nicholson Eng. Co., Tacoma, Wash., on city platting and topographic surveys. *TT 0.4: SP 0.4.*—June to Sept. 1925 Topographer on timberland survey, and June to Oct. 1926 Field Engr. and Topographer on timberland survey, logging, engineering and railroad location, with Jno. P. Van Orsdel, Seattle, Wash. *TT 0.5: SP 0.3: P 0.2: RC 0.2.*—Nov. 1920 to Dec. 1921, April to Dec. 1922, April 1923 to Jan. 1924, June to Sept. 1924 and Nov. 1926 to date with Weyerhaeuser Timber Co., Tacoma, Wash., as Compassman, Topographer, Instrumentman and Draftsman on timberland surveying and railroad location and construction, and (since Nov. 1926) as Draftsman, Asst. Office and Field Engr. in Rainier, Longview and Tacoma, Wash., on timberland surveys, railroad location, construction and maintenance, Valuation Order No. 3 work, sawmill construction, contract payment, estimates for mill and railroad construction, computation for hydraulic fill quantities, valuation and appraisal of plant electric equipment, plans and specifications for standard railroad pile trestle, dock, log dump, fuel conveyor, fire-protection system, plant industrial-track system, right-of-way, etc. *TT 5.3: SP 1.7: P 4.1: RC 3.8.*—*TT 7.2: SP 2.4: P 4.8: RC 4.* Refers to J. A. Arntson, E. L. Greene, O. H. Hallberg, W. J. Ryan, B. P. Thomas.

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(10) BOND, CHARLES FORREST, 515 West Walker Ave., College Park, Ga. (Age 32. Born Canon, Ga.) Sept. 1916 to Oct. 1918 student, Georgia School of Technology. *TT 1: P 1.*—Jan. to Sept. 1920 Draftsman, Sept. 1920 to June 1925 Res. Engr., June 1925 to March 1930 Office Engr., and March 1930 to March 1931 Statistician, State Highway Dept. of Georgia, Americus, Dublin, and (after March 1930) Atlanta, Ga. At present with Dixie



Culvert & Metal Co., Atlanta. *TT 10.8: SP 0.3: P 10.5: RC 10.5: D 3.—TT 11.8: SP 0.3: P 11.5: RC 10.5: D 3.* Refers to J. H. Archer, W. C. Caye, Jr., M. E. Cox, B. P. McWhorter, T. M. Neibling, C. L. Rhodes, E. N. Seymour.

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(9) **BONNER, JOSEPH PATRICK**, 76 Smith Pl., Columbus, Ohio. (Age 25. Born Washington, D. C.) 1929 B. S. in C. E., Catholic Univ. of America, Washington, D. C. *TT 4: P 4.—Oct. 1929 to Feb. 1930 Computer, Virginia State Highway Dept., Richmond, Va., computing earthwork, establishing grades, etc. TT 0.4: P 0.4.—Feb. 1930 to date Jun. Engr., U. S. Geological Survey, Columbus, Ohio, collecting stream-flow data, compiling results, etc. TT 1.1: P 1.1.—TT 5.5: P 5.5.* Refers to E. F. Coddington, N. C. Grover, J. C. Hoyt, L. Lee, A. J. Scullen, J. R. Shank.

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(2) **BOWERS, SAMUEL WARREN**, Box 620, Southington, Conn. (Age 27. Born Southington, Conn.) June 1921 to Sept. 1924 with MacKenzie & Lotz, Southington, Conn. until June 1922 in charge of survey party, from Jan. 1922 to Jan. 1923 Asst. to Engr. on raising of dam at No. 2 Reservoir of Southington Water Dept., made surveys and maps for distribution system for Yalesville (Conn.) Water Co., etc., and after Jan. 1923 Inspector on construction of intake and pipe line for Avon Water Co., and on installation of distribution system for Yalesville Water Co. (since then has superintended all additions to systems). *TT 1.6: SP 1.6.—Sept. 1924 to Jan. 1930 with Samuel H. MacKenzie, until Dec. 1926 on surveys and maps for Ensign-Bickford Co., Avon and Simsbury, Conn., and surveys and engineering for installation of Layne well and pump for Terryville Water Co., 1927 made surveys for construction of sewerage and sewage-disposal system for factory and houses of Ensign-Bickford Co., Simsbury, determined location of sewers and drew plans for disposal system from design by Wm. A. MacKenzie, Wallingford, Conn., 1928 had charge of construction of sewerage and sewage-disposal system at Simsbury (over 1 mile of sewers, sewage storage and pump well, force main, disposal tanks and sludge bed) and made surveys and superintended installation of sewerage system for Mountain View, Avon, Conn., for Ensign-Bickford Co., and 1929 assisted on design of and drew plans for disposal plant for Mountain View district, being in charge of installation of tanks, sand filters and sludge bed. TT 5.3: P 5.3: RC 1.1.—Jan. 1930 to date member of firm, MacKenzie & Bowers, Engrs. and Surveyors; designed and had charge of installation of two small sewerage and sewage-disposal systems, made surveys for installation of sewerage system for Avon factory, and made investigations for increased storage for water power, all for Ensign-Bickford Co.; has done considerable surveying and engineering work and has been in charge of considerable construction for Water Dept. of Southington, Terryville Water Co., and for W. A. MacKenzie, C. E., of Wallingford. TT 1.3: P 1.3: RC 0.3.—TT 8.2: SP 1.6: P 6.6: RC 1.4.* Refers to C. M. Blair, J. D. Brown, J. N. McKernan, E. T. Nettleton, W. J. Scott.

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(15) **BROYLES, JOHN SUMMERFIELD**, 1319 West Bell St., Houston, Tex. (Age 39: Born Friendship, Tenn.) 1916 B. S. in C. E., Univ. of Wis. *TT 4: P 4.—June to Oct. 1916 Draftsman, Wisconsin Highway Comm. TT 0.1: SP 0.1.—Oct. 1916 to Jan. 1918 and March to Aug. 1919 Res. Engr., Milwaukee Sewerage Comm., on sewer-tunnel construction. TT 1.4: SP 0.3: P 1.1.—Jan. 1918 to Jan. 1919 with U. S. Navy, Aviation.—Aug. to Nov. 1919 Chf. of Party, Morgan Eng. Co., on highway work in Crittenden County, Ark. TT 0.3: P 0.3.—Nov. 1919 to Feb. 1920 Timekeeper, Southern Improvement Co., Contrs.—Feb. to June 1920 with W. F. Schultz, Cons. Engr., Memphis, Tenn., in charge of field party on river and rail terminals. TT 0.3: P 0.3.—June to Dec. 1920 Engr. with Livar & Hamilton, Contrs., estimating and engineering. TT 0.4: P 0.4.—March to June 1921 Res. Engr., Helena-Ferguson Road Dist., Arkansas. TT 0.3: P 0.3.—June 1921 to Jan. 1922 Engr., Emerson-Johnson & Co., Humboldt, Iowa, estimating, etc. TT 0.5: P 0.5.—Jan. to May 1922 Contr., small culverts and head walls. TT 0.3: P 0.3.—May 1922 to April 1923 Asst. Engr., Lone Star Gas Co., in charge of field parties. TT 1: P 1.—April to June 1923 Asst. Engr., Sims Oil Co., Dallas, Tex., supervising construction. TT 0.1: P 0.1.—June 1923 to March 1926 Asst. Engr., Lone Star Gas Co., after Nov. 1923 in charge of construction of compressor station, being Superv. Supt. of Constr. TT 2.7: P 2.7: RC 2.7.—March to June 1926 Chf. of Field Party, Wichita Irrigation Project No. 3, on canal location. TT 0.2: P 0.2.—June 1926 to June 1930 Chf. Engr., Houston Gulf Gas Co., designing and supervising construction of natural gas transmission lines, distribution systems, compressor stations, etc. TT 4: P 4: RC 4: D 4.—June 1930 to Feb. 1931 Engr., United Gas Co., in charge of field parties on transmission-line surveys also designing transmission and distribution systems. TT 0.6: P 0.6: D 0.6.—TT 16.2: SP 0.4: P 15.8: RC 6.7: D 4.6.* Refers to F. L. Chase, H. Culpeper, H. L. Dunham, J. L. Ferebee, E. H. Shaw, R. C. S. Watson, P. A. Welty.

(16) **BURNS, CHARLES PHILLIPS**, 607 Postal Telegraph Bldg., Kansas City, Mo. (Age 29. Born Denver, Colo.) Student, Tri-State Coll. of Eng., Angola, Ind. ( $\frac{1}{2}$  year) and Univ. of Michigan ( $\frac{1}{2}$  year).—Oct. 1920 to May 1921 and Jan. to June 1922 Chainman, successfully on railroad location in Ranger, Tex., and with S. R. DeBoer, Denver, Colo. *TT 0.5: SP 0.5*.—March to Aug. 1923 Chainman and Levelman, U. S. National Park Service, on highway location. *TT 0.2: SP 0.2*.—Nov. 1923 to May 1924 Chainman, Draftsman and Transitman. Terrell Tyler Interurban Association, Boulder, Colo., on railroad location. *TT 0.2: SP 0.2*.—May to Oct. 1925 Levelman and Transitman, U. S. National Park Survey, and Jan. to May 1926 Transitman, Oklahoma State Highway, highway location. *TT 0.4: SP 0.4*.—May 1926 to Sept. 1927 Levelman, Draftsman and Transitman, and May to Dec. 1928 Asst. Res. Engr., U. S. Bureau of Public Roads, Denver, on highway location and construction. *TT 0.9: SP 0.9*.—March 1929 to date with U. S. Engrs., Kansas City, Mo., until May 1929 as Recorder, then Chf. of Party, on flood-control survey. *TT 1.9: SP 0.1: P 1.8*.—*TT 4.2: SP 2.4: P 1.8*. Refers to H. A. Alderton, Jr., G. B. Archibald, A. C. Bux, J. O. Hunt, A. E. Palen.

(12) **CAMPBELL, BENJAMIN LUCIEN**, 321 Customhouse, Portland, Ore. (Age 48. Born Mankato, Minn.) Prof. Civ. Engr., State of Oregon.—1903 to 1904 Instrumentman and Asst. Engr., Guggenheim Exploration Co., Colorado, Missouri and Mexico, on surveys, sampling and computations. *TT 0.5: SP 0.5*.—1906 (6 months) Asst. Engr., Federal Mining & Smelting Co., Wallace, Idaho, and Aug. 1908 to March 1909 Asst. Engr., Blue Ledge Copper Mine, Siskiyou County, Cal., on surveys, drafting, computations, assaying, etc. *TT 0.7: SP 0.2: P 0.5: RC 0.5: D 0.5*.—June 1909 to March 1910 Leveler, Instrumentman and Asst. Engr., Oregon R. R. & Navigation Co., on location, construction and maintenance. *TT 0.3: SP 0.2: P 0.1*.—March to June 1910 and Nov. 1910 to Jan. 1911 Computer with R. S. Greenleaf, C. E., and June-Sept. 1910 Draftsman, acting as Computer, with D. W. Taylor, C. E., Portland, on curvilinear subdivisions. *TT 0.7: P 0.7: RC 0.7: D 0.7*.—Oct. to Nov. 1910 and May to June 1911 Civ. Engr. (private practice) at Portland, on classified farm land in Douglas County, Ore., and (1911) on surveys of farm land and water-power project and maps of mining districts, Grants Pass, Ore. *TT 0.2: P 0.2: RC 0.2: D 0.1*.—March to May 1911 Res. Engr., Grants Pass & Rogue River R. R., Grants Pass, in charge of railroad and bridge construction. *TT 0.2: P 0.2: RC 0.2*.—April to Sept. 1912 Asst. Engr., Boston & Maine R. R., New Hampshire, on location, maintenance and reconnaissance. *TT 0.4: P 0.4: RC 0.4: D 0.2*.—Sept. 1912-Dec. 1913 Engr. of Operation, with Joseph McCable, Contr., Providence, R. I., estimates, plans of operation, railroad grades, tunnels, subway, shoring of heavy buildings. *TT 1.3: P 1.3: RC 1.3: D 1.3*.—Jan. to May 1914 Res. Engr., New York, New Haven & Hartford R. R., Providence, on valuation, in charge of field work between Providence and Boston. *TT 0.2: P 0.2: RC 0.2*.—May to Oct. 1914 and May 1915 to June 1916 Asst. Engr., Alaskan Eng. Comm., Seward, Alaska, appraised, and (after May 1915) had charge of relocation and reconstruction of part of, Alaska Northern R. R. *TT 1.5: P 1.5: RC 1.5: D 1.1*.—Dec. 1914 to March 1915 Rodman and Levelman, California Highway Comm., Siskiyou County. *TT 0.1: SP 0.1*.—July to Aug. 1916 Surveyor on tramway, Queen of Bronze Mine, Josephine County, Ore. *TT 0.1: P 0.1: RC 0.1*.—Aug. to Dec. 1916 Compassman and Timber Cruiser, Gen. Land Office, Portland, classified Oregon & California R. R. land grant in Oregon; May to July 1917 Instrumentman and Surveyor, Grey Eagle Copper Mine, Siskiyou County, in charge of party on topographic survey, computations and drafting. *TT 0.4: SP 0.1: P 0.3: RC 0.1: D 0.1*.—Aug. to Sept. 1917 Rodman, Pacific Power & Light Co., Astoria, Ore., being Inspector on construction of railroad trestle.—Sept.-Dec. 1917 Promoter and Chf. Engr. on railroad location, Grants Pass, Ore., to Eureka, Cal. *TT 0.3: P 0.3: RC 0.3: D 0.3*.—Sept. 1918 to Feb. 1919 Levelman, U. S. Office of Public Roads and Rural Eng., Montana, Idaho and Oregon, Instrumentman on highway location and construction. *TT 0.2: SP 0.2*.—May to July 1919 Locating Engr., Pacific Coast R. R., Polk County, Ore. *TT 0.2: P 0.2: RC 0.2: D 0.2*.—Oct. 1919 to May 1920 Draftsman, Southern Pacific Ry. Co., on estimate of structures. *TT 0.3: SP 0.3*.—May to Sept. 1920 Min. Engr., New Idria Quicksilver Min. Co., San Benito County, Cal., on surveys, computation and design of ore feed and bins. *TT 0.4: P 0.4: RC 0.4: D 0.1*.—Oct. to Nov. 1920 Draftsman with W. H. Thomas, C. E., Portland, on railroads and contour maps.—Dec. 1920 to Nov. 1925 Asst. Engr., Port of Portland, Ore., on surveys, estimates, design, reports, drafting, computations, inventory, dikes, dredging, fills, equipment; constructed relief map (125 ft. long) of Willamette and Columbia Rivers, Portland to the sea. *TT 4.9: P 4.9: RC 4.9: D 2*.—Nov. 1925 to May 1926 Dist. Engr., School Dist. No. 1, Multnomah County, Ore., at Portland, on surveys, estimates, design, supervision, grounds, walks, roadways, retaining walls. *TT 0.5: P 0.5: RC 0.5: D 0.5*.—May 1926-Oct. 1927 Transitman and Draftsman, Bureau of Constr., Portland, on street widening and extensions. *TT 0.8: SP 0.8*.

—Dec. 1927 to Jan. 1928 Locating Engr., logging railroad, Polk County, Ore. *TT 0.1: P 0.1: RC 0.1: D 0.1.*—April to June 1928 Inspector, Bureau of Reclamation, Sun River, Mont., being Instrumentman in charge of party on Gibson dam construction. *TT 0.1: P 0.1: RC 0.1.*—June to Nov. 1928 Instrumentman, Spokane Portland & Seattle Ry., Portland, in charge of party on maintenance, realignment of tracks and bridges in yards and on main lines, sidings, buildings. *TT 0.5: P 0.5: RC 0.2.*—Nov. 1928 to date Draftsman and Asst. Engr., U. S. Engrs., War Dept., Portland, on project study of Columbia River, drafting, flood control investigation and text, investigation and estimates of railroad and highway revisions to clear backwater from proposed dams. *TT 1.4: SP 0.9: P 0.5: RC 0.5: D 0.5.*—*TT 16.5: SP 3.5: P 13: RC 12.4: D 7.7.* Refers to A. L. Allin, G. R. Lukesh, S. Murray, L. K. Needham, J. H. Polhemus, H. A. Rands, C. F. Thomas.

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(10) CHARLTON, JOHN FELDER, Box 2086, Ft. Lauderdale, Fla. (Age 45. Born Savannah, Ga.) Student Georgia School of Technology (1902 to spring 1904) and Washington & Lee Univ. (Sept. 1904 to April 1905). *TT 0.5: P 0.5.*—Summers Rodman on surveys.—April 1905 to May 1914 Instrumentman, Inspector, Draftsman and Chf. of Party, on railroad location, construction and maintenance, with U. S. Engr. Office, and on municipal work. *TT 5.1: SP 4: P 1.1: RC 0.7: D 0.4.*—Feb. to June 1914 Chf. Engr., Burton Swartz Cypress Co., Perry, Fla., in charge of construction of mill buildings, log pond, railroad yards and mill village; designed and supervised construction of small sewer system. *TT 0.2: P 0.2: RC 0.2: D 0.2.*—July to Oct. 1914 Chf. of Party on surveys in Everglades, Fla. *TT 0.2: P 0.2: RC 0.2.*—Nov. 1914 to Jan. 1915 Inspector, City of Savannah, Ga., on concrete sewer construction. *TT 0.1: SP 0.1.*—Jan. 1915 to March 1916 Asst. Engr., Standard Lumber Co., Live Oak, Fla., on railroad location and construction, surveys, building design and construction. *TT 0.9: SP 0.2: P 0.7: RC 0.6: D 0.2.*—April 1916 to June 1917 Asst. County Engr., Ft. Lauderdale, Fla., on highway location, design and construction, bridge and culvert construction, drainage. *TT 0.9: SP 0.3: P 0.6: RC 0.6: D 0.4.*—Sept. 1917 to June 1919 Prin. Asst. Engr., and Aug. 1919 to Nov. 1924 Chf. Civ. Engr., Savannah River Lumber Co., on railroad location and construction, drainage, mill building design and construction and surveys. *TT 6.9: P 6.9: RC 6.9: D 2.7.*—June to Aug. 1919 City Engr., Brunswick, Ga., on streets, sewers, etc. *TT 0.2: P 0.2: RC 0.2: D 0.2.*—Nov. 1924 to date member of firm, Charlton & Davis, Civ. Engrs., Ft. Lauderdale, on highway, drainage, valuation surveys, etc.; 1925, 1929 and 1930 County Engr., Ft. Lauderdale; in local charge of canal surveys, Florida Inland Navigation Dist., and City Engr., Dania, Fla. *TT 6.5: P 6.5: RC 6.5: D 2.3.*—*TT 21.5: SP 4.6: P 16.9: RC 15.9: D 6.4.* Refers to R. M. Angas, G. B. Hills, B. P. McWhorter, C. H. Ruggles, V. G. Watters, G. A. Youngberg.

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(3) COOK, HOWARD LEE, Box 298, Voorheesville, N. Y. (Age 25. Born Oxford Junction, Iowa.) 1929 B. S. in C. E., State Univ. of Iowa. *TT 4: P 4.*—June 1929 to date Asst. Engr. with Robert E. Horton, Cons. Engr., Voorheesville, N. Y., on hydrologic and hydraulic computations and topographic, river and sanitary surveys. *TT 1.8: P 1.8: RC 0.3.*—*TT 5.8: P 5.8: RC 0.3.* Refers to R. E. Horton, H. R. Leach, F. A. Nagler, J. D. Wardle, S. M. Woodward.

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(11) COOMBS, THOMAS, 357 City Hall, Los Angeles, Cal. (Age 52. Born Brooklyn, N. Y.) 1903 B. S., and (later) C. E., Cooper Union. *TT 4: P 4.*—June 1903 to Jan. 1904 and Nov 1904 to June 1905 Rodman, successively with Add'l Water Supply Comm., Metropolitan St. Ry., and Rapid Transit Co., New York City. *TT 1.1: SP 0.3: P 0.3: D 0.1.*—Feb. to Sept. 1904 Engr., Wanamaker's Bldg., New York City, having charge of constructing and placing grillage foundations, and of building to third-floor construction. *TT 0.5: P 0.5: RC 0.5.*—July 1905 to July 1910 Draftsman and Instrumentman, until Feb. 1907 with Topographical Bureau, Queens County, part of time in charge of party, then with Bureau of Sewers, Brooklyn, N. Y., designed sewer systems and (part of time) Inspector. *TT 4.8: SP 0.3: P 4.5: RC 1.3: D 2.*—Aug. 1910 to Aug. 1912 and Aug. 1913 to Aug. 1917 Quartermaster, and Sept. 1917 to Nov. 1919 Capt. Quartermaster, U. S. Army, being Civ. Engr.; had charge of Drainage and Road Dept. and later was Chf. Engr. of Quartermaster work on Corregidor Island, Manila Bay, including design and construction of 3-story concrete barracks; then designed and constructed various buildings, made surveys, etc., in Manila, later at Ft. Sill, Okla., in charge of all engineering for the post, including (1917) design and construction of cantonment; after war had charge of boat on surveys and inspection of ports between Huron and Toledo. *TT 7.5: SP 0.8: P 6.7: RC 6.7: D 2.1.*—Sept. 1912 to July 1913 Draftsman, Bureau of Sewers, Brooklyn. *TT 0.9: P 0.9: RC 0.2: D 0.6.*—Dec. 1919 to Dec. 1920 with Ford Motor Co. *TT 0.5: SP 0.5.*—Feb. 1921 to March 1922 Asst. Engr., U. S. Engrs., Detroit, Mich., in charge of surveys and investigations. *TT 1.1: P 1.1: RC 1.1: D 0.2.*—Dec. 1922



to Dec. 1926 Asst. Structural Engr., Bldg. Dept., Los Angeles, Cal., checking plans. *TT 4: P 4: D 4.*—Jan. 1927 to Aug. 1929 Planning Engr., City Planning Comm. *TT 2.5: P 2.5: RC 2.5: D 2.*—Sept. 1929 to date Mgr., City Planning Comm. *TT 1.5: P 1.5: RC 1.5: D 0.2.*—*TT 26.3: SP 1.8: P 24.7: RC 9.5: D 11.6.* Refers to D. M. Baker, J. O. Marsh, H. Z. Osborne, DeW. L. Reaburn, D. M. True.

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(7) COUSE, WALTER LEARNED, 11 McLean Ave., Detroit, Mich. (Age 29. Born Cleveland, Ohio.) 1924 B. S. C. E. and M. S. C. E., Univ. of Mich. *TT 4: P 4.*—June 1924 to March 1925 Instrumentman and Inspector, City of Spring Wells (Fordson), Mich. *TT 0.3: SP 0.3.*—March 1925 to Oct. 1926 Engr., H. E. Culbertson Co., R. R. Contrs., Detroit, Mich., in charge of field work. *TT 1.6: P 1.6: RC 1.6.*—Oct. 1926 to June 1928 Res. Engr., City of Flint, in charge of construction of sewage-disposal plant. *TT 1.7: P 1.7: RC 1.7.*—June 1928 to date Engr. and Supt. in charge of building construction, W. E. Wood Co., Detroit. *TT 2.7: P 2.7: RC 2.7.*—*TT 10.3: SP 0.3: P 10: RC 6.* Refers to J. H. Cissel, W. R. Drury, H. C. McClure, G. W. McCordic, H. E. Riggs, A. Roth.

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(1) COX, JOHN JOSEPH, 549 Isham St., New York City. (Age 22. Born New York City.) 1930 B. S. in C. E., Manhattan Coll. *TT 4: P 4.*—Summer 1929 Rodman, Dept. of Parks, New York City, assisting in laying out paths, curbing and sewer lines, establishing building lines, surveys, etc.—Sept. 1930 to date Post-Graduate Student, Manhattan Coll.—*TT 4: P 4.* Refers to C. E. Beam, J. J. Costa.

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(2) CROCKER, HAROLD SIMPSON, 304 Spring St., Brockton, Mass. (Age 42. Born Brockton, Mass.) Student, Massachusetts Inst. of Technology (Sept. 1909 to Feb. 1911) and Franklin Union, Boston, Mass. (Oct. 1912 to March 1914, nights).—March 1911 to Jan. 1913 Transitman, Jan. 1913 to Jan. 1914 Chf. of Party, and Jan. 1914 to March 1916 Asst. Engr. in charge of highway and water-works construction, City Engr.'s Dept., Brockton, Mass. *TT 2.5: SP 2.5.*—April 1916 to Jan. 1918 member of firm, Jackson & Crocker, Archts. and Civ. Engrs., Brockton. *TT 1: P 1: RC 1.*—Jan. 1917 to date City Engr. of Brockton, in charge of design and construction of water mains, sanitary and storm sewers, highways, bridges, culverts, etc., including design of electrical sewage-pumping plant and sewage-purification works, with plain sedimentation and trickling filters. *TT 14.2: P 14.2: RC 14.2: D 14.2.*—*TT 17.7: SP 2.5: P 15.2: RC 15.2: D 14.2.* Refers to F. A. Barbour, E. S. Chase, X. H. Goodnough, R. S. Weston, B. L. Winslow.

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(1) DAYTON, CEDRIC LODGE, 2 Park Ave., New York City. (Age 29. Born New York City.) 4 years (nights) student in Civ. Eng., Cooper Union; also took courses in Reinforced Concrete Design at Columbia Univ. and in Structural Steel Design and in Constr. Materials at Coll. of City of New York.—Feb. 1922 to date Draftsman, Squad Leader and Designer, Concrete Steel Co., New York City, laying out and detailing reinforced concrete structures, and later designing concrete and structural steel; past 4 years (approx.) on design and in responsible charge of work, making calculations and decisions and supervising drawings; since Feb. 1929 (evenings) also Instructor in mathematics, Coll. of City of New York, teaching Calculus. *TT 8.7: SP 0.4: P 8.3: RC 4.1: D 1.* Refers to N. A. Alexieff, J. F. Curley, W. J. Kupec, F. O. X. McLoughlin, R. E. Werley.

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(1) EARNHARDT, WILLIAM CRAWFORD, Jr., 3118 Twenty-Eighth Ave., Astoria, N. Y. (Age 25. Born Greenville, S. C.) 1929 B. S. in C. E., Duke Univ. *TT 4: P 4.*—June to Dec. 1929 Jun. Engr., The Fiske Carter Constr. Co., Worcester, Mass. *TT 0.5: P 0.5.*—Jan. 1930 to Feb. 1931 Jun. Engr., United Fruit Co., Puerto Barrios, Guatemala. *TT 1.1: P 1.1.*—*TT 5.6: P 5.6.* Refers to H. C. Bird, W. H. Hall, B. B. Lewis.

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(16) EISENHUTH, HAROLD PAUL, 403 P O. Bldg., Denver, Colo. (Age 27. Born Reynoldsville, Pa.) 1928 B. S. in Civ. and Irrigation Eng., Colo. Agri. Coll. *TT 4: P 4.*—June 1928 to Feb. 1929 Inspector, Pennsylvania Highway Dept. *TT 0.7: P 0.7.*—Feb. 1929 to date Jun. Engr., U. S. Geological Survey. *TT 2: P 2.*—*TT 6.7: P 6.7.* Refers to O. V. Adams, J. E. Field, R. Follansbee, T. C. Frame, R. I. Meeker.

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(9) FANNER, PERCIVAL ARTHUR, East Forty-Fifth and St. Clair Ave., Cleveland, Ohio. (Age 40. Born Woodbridge, Ont., Canada.) About 3 years student, Toronto Technical School.—Feb. to April 1910 Draftsman with C. W. Root, Civ. Engr., Cleveland, Ohio, plotting city maps and surveys. *TT 0.1: SP 0.1.*—May 1910 to April 1914 with Bardons & Olliver, Mfrs. of Machine Tools, Cleveland, as Detail Draftsman, later Machine Designer



and Layoutman, being Asst. to Chf. Draftsman. TT 3.3: SP 0.6: P 2.7: D 1.—May 1914 to July 1915 Engr., W. W. Sly Co., Cleveland, on structural and mechanical designing and Estimating Engr. on foundry equipment, tumbling mills, sand blast and dust-collecting systems, etc. TT 1.3: P 1.3: RC 0.5: D 0.8.—Aug. 1915 to May 1916 and Nov. 1920 to July 1921 Structural and Mech. Engr., Wellman Seaver-Morgan Co., Cleveland, being Designer, Checker and Layoutman on and (after Nov. 1920) initiating and checking designs for bridges, dumpers, unloaders, etc., for coal and ore handling. TT 1.6: P 1.6: D 1.6.—June 1916 to Aug. 1917 and May to Sept. 1922 Engr., C. O. Bartlett & Snow Co., Cleveland, being Structural and Mech. Designer, Checker and Estimating Engr. on material-handling equipment. TT 1.7: P 1.7: D 1.4.—Jan. 1919 to Oct. 1920 and Aug. 1921 to April 1922 in private practice as Fanner & Brown, Cleveland, on structural design and concrete work for architects, layout and design on industrial plants, drafting, etc. TT 2.6: P 2.6: RC 2.6.—Sept. 1917 to Dec. 1918 and Oct. 1922 to Dec. 1924 with Frazier Sheal Co., Cleveland, until Dec. 1918 as Mechanical and Structural Engr., in charge of mechanical work for design and superintendence of construction of coal- and ore-handling equipment, and after Oct. 1922 Engr. superintending design and construction of coal- and ore-dock machinery, surveying for water supply, etc. TT 3.6: P 3.6: RC 3.6.—Jan. 1925 to date Estimating Engr., Industrial Brownhoist Corporation, Cleveland, mechanical and structural designs and estimates on material-handling equipment and plants, surveying. TT 6.3: P 6.3: RC 6.3.—TT 20.4: SP 0.7: P 19.7: RC 12.9: D 4.8. Refers to J. W. Frazier, B. C. Jacob, J. E. A. Linders, J. F. Poland, R. E. Sheal, E. W. Taylor, W. L. Westcott.

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(13) FERNSTROM, JOHN ARCHIE, 2020 Brown St., Napa, Cal. (Age 23. Born Seattle, Wash.) 1931 A. B., Stanford Univ. TT 4: P 4.—At present graduate student, Stanford Univ.—TT 4: P 4. Refers to A. A. Brown, U. G. Brown, H. Forbes, C. Moser, L. B. Reynolds.

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(3) FOX, FREDERICK CARL, Jr., 287 Mill St., Poughkeepsie, N. Y. (Age 26. Born Albany, N. Y.) 1926 B. S. in C. E., Union Coll. TT 4: P 4.—Summer 1925 and July 1926 to Aug. 1930 Jun. Asst. Engr., and Aug. 1930 to date Asst. Engr., New York State Dept. of Public Works, until Feb. 1928 being Instrumentman, and Inspector on drainage structures and on concrete mixer, inspecting sand and stone aggregates, etc., also estimating, staking out and supervising construction of stone-masonry retaining walls, running line and grade for highway pavements and inspecting materials for construction of reinforced concrete bridge structures, etc.; Feb. 1928 to Aug. 1930 in Dist. Office, Bridge Dept., designing, detailing and estimating short-span bridge structures, after March 1929 being Asst. to Bridge Engr. supervising all office work on bridges, involving some design of retaining walls, laying out working schedules, plotting bridge sites (with contours) from survey notes, recording information for design, designing and estimating structures, making field investigations, reviewing falsework and steel plans for construction, etc.; since Aug. 1930 Asst. Bridge Engr. in charge of bridge work of Dist. TT 3.9: SP 0.8: P 3.1: RC 1.9: D 3.1.—TT 7.9: SP 0.8: P 7.1: RC 1.9: D 3.1. Refers to F. W. Burnett, A. de H. Hoadley, L. S. Hulburd, F. P. McKibben, H. A. Schauffer, W. C. Taylor.

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(1) GALLAGHER, ALFRED CHAPIN, 2020 Voorhies Ave., Brooklyn, N. Y. (Age 39. Born Brooklyn, N. Y.) 1915 C. E., Rens. Pol. Inst. TT 4: P 4.—Summer 1913 Rodman, and Inspector on grade-crossing construction, Long Island R. R.—Summer 1914 Rodman, Bureau of Highways, Brooklyn, N. Y.—Aug. 1915 to Feb. 1916 Asst. Foreman, Interboro Rapid Transit Subway Constr. Co., New York City, in charge of removing excavated material. TT 0.2: SP 0.2.—Feb. to Sept. 1916 Student Engr., Lidgerwood Mfg. Co., New York City, being Mechanic's Helper and later Mechanic assembling and erecting hoisting machinery. TT 0.3: SP 0.3.—Sept. 1916 to date (except Aug. 1917 to Sept. 1919 Lieut., 12th Field Artillery, 2d Div., U. S. Army) with Turner Constr. Co., New York City, 4 years as Time-keeper, Material Clerk, Line and Grade and Asst. Supt. on eight building operations, and since 1922 Supt. in charge on fifteen building operations and a number of miscellaneous small jobs. TT 11.5: SP 1: P 10.5: RC 10.5.—TT 16: SP 1.5: P 14.5: RC 10.5. Refers to R. W. Boyd, DeF. H. Dixon, E. J. Moore, H. C. Paddock, J. P. H. Perry, E. Praeger, T. A. Smith.

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(6) GEIGER, CHARLES JEWELL, 3505 Meadowcroft Ave., Mt. Lebanon, Pittsburgh, Pa. (Age 33. Born Princeton, Ind.) 1927 B. S. in C. E., Purdue Univ. TT 4: P 4.—June 1923 to Feb. 1926 with Bridge Dept., Indiana State Highway Comm., until April 1924 as Bridge Inspector, then Field Engr. in charge of a district, having direct charge of highway bridge

construction (under Constr. Engr.), steel pony trusses up to 90-ft. span, concrete girder bridges and arch structures including two bridges of three 60-ft. spans; staked out the bridges, gave lines and grades, determined quantities, made estimates, superintended construction, etc.; winters Chf. of Bridge Survey Party making surveys and recommending type and size of new structures, including surveys for Petersburg (Ind.) Bridge over White River, etc. *TT 2.2: SP 0.4: P 1.8.*—Feb. 1926 to June 1927 student.—Sept. 1927 to date with Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa., until July 1929 as Draftsman detailing standpipes and elevated tanks, and since July 1929 Constr. Engr., on design of falsework, abutments and slab forms for steel bridges, design and detailing of two 10-ton travelling derricks for erection of Point Marion (Pa.) Bridge, and later in direct charge of erection of the bridge (under Mgr. of Eng. Dept. of Company), including raising of 232-ft. 200-ton span from barge 45 ft. into place with hydraulic jacks; work also included design and detailing of central mixing plants, concrete elevators, etc., design of small bridges, concrete pile foundations, steelwork for incinerators, etc. *TT 2.6: SP 0.9: P 1.7: RC 1.7.*—*TT 8.8: SP 1.3: P 7.5: RC 1.7.* Refers to G. L. Christy, I. D. Goodwin, L. A. Idle, J. O. Jackson, J. E. O'Leary, W. J. Titus, R. B. Wiley.

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(4) GRIMES, HOWARD BECKER, 456 Montclair Ave., Bethlehem, Pa. (Age 23. Born Womelsdorf, Pa.) 1931 B. S. in C. E., Lehigh Univ. *TT 4: P 4.*—Summer 1928 Draftsman, Metropolitan Edison Co., Reading, Pa. *TT 4: P 4.* Refers to H. G. Payrow, C. H. Sutherland, E. H. Uhler, W. L. Willson.

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(5) HAIGHT, FRANK JOSHUA, 5507 Thirty-third St. N. W., Washington, D. C. (Age 37. Born Barker, N. Y.) 1917 B. E. in E. E., N. C. Coll. of Agri. & Eng. *TT 4: P 4.*—June 1917 to July 1919 successively 2nd Lieut., 1st Lieut. and Capt., U. S. Marine Corps, at Quantico, Va. and after Dec. 1917 with 1st Brigade Marines in Haiti; commanded 57th Co. in Haitian Campaign. *TT 0.4: P 0.4: RC 0.8.*—Oct. 1919 to March 1921 with Carolina Power & Light Co., until April 1920 with New Business Dept. in Raleigh and Goldsboro, S. C. and May 1920 to March 1921 Asst. to local Managers in Goldsboro and Florence, S. C. *TT 0.8: P 0.8.*—April 1921 to date Tidal Mathematician, Div. of Tides and Currents, U. S. Coast & Geodetic Survey, until April 1925 on tabulation, computation, analysis and adjustment of field data from surveys, then in responsible charge of preparing tide and current survey data for publication and since April 1929 Asst. to Chf., Section of Reductions, in responsible charge of reduction of current records. *TT 9.9: P 9.9: RC 5.8: D 1.*—*TT 15.1: P 15.1: RC 6.1: D 1.* Refers to W. Bowie, L. P. Disney, H. A. Marmer, G. T. Rude, P. C. Whitney.

## 307

(5) HAIN, ELMER LAMONT, 742 Rock Creek Church Road N. W., Washington, D. C. (Age 44. Born Edgerton, Wis.) 1910 B. S. in Civ. Eng., Univ. of Wis. *TT 4: P 4.*—Summers 1906 and 1907, June 1908 to Nov. 1909 and Feb. 1910 to June 1917 with U. S. Geological Survey, successively as Leveler, Field Asst., and Jun. Topographer and Asst. Topographer in charge of party, on topographic mapping, etc. *TT 8.8: P 8.8: RC 5.5.*—June 1917 to March 1919 1st Lieut. Engrs., Co. A, 29th Engrs., U. S. Army, United States and France, on topographic mapping gathering military information, etc., and teaching in Engr. and Intelligence Schools, A. E. F. *TT 1.8: P 1.8: RC 0.4.*—March 1919 to date (except two weeks in July 1927 Instructor, Univ. of Wisconsin) with U. S. Geological Survey, in charge of party on topographic mapping until April 1919 as Topographer, April 1919–June 1924 Topographic Engr., July 1924 to Oct. 1928 Associate Topographic Engr. (reclassified), Nov. 1928 to June 1929 Topographic Engr., and since July 1929 Technical and Administrative Asst. to, and, at times acting in place of, Chf. Topographic Engr. *TT 11.9: P 11.9: RC 11.5: D 11.5.*—*TT 26.5: P 26.5: RC 17.4: D 11.5.* Refers to W. M. Deaman, C. H. Birdseye, F. M. Hart, H. H. Hodgeson, T. P. Pendleton, C. L. Sadler, J. G. Staack, R. M. Wilson.

## 308

(15) HAMILTON, VIVIAN EARLE, Jr., P. O. Box 1702, Houston, Tex. (Age 28. Born San Antonio, Tex.) 1920 to 1922 student in Elec. Eng., Texas Agricultural & Mechanical Coll. *TT 0.5: P 0.5.*—July to Oct. 1922 Rodman and Instrumentman, Hope Eng. Co., Mt. Vernon, Ohio. *TT 0.2: SP 0.2.*—March 1923 to March 1926 Engr. and Field Mgr., San Antonio Oil & Natural Gas Co., surveying, locating wells, preparing reports for State R. R. Comm., checking sales meters, looking after well drilling, etc. *TT 2.5: SP 0.5: P 2.*—March 1926 to Sept. 1927 Engr., responsible for surveying and mapping of leases and lines, and Sept. 1927 to March 1929 Chf. Engr., Southern Gas Co., assisting on design of new projects, including extension from San Antonio to New Braunfels and Seguin, with distribution

systems and responsible during construction for adherence to specifications, preparing contractor's estimates, etc. *TT 3: P 3: RC 1.5.*—March 1929 to July 1930 Engr. and Inspector, United Gas Eng. Corporation, in charge of building gas-pipe line from near Laredo, Tex. to Monterey, Nuevo Leon, Mexico, and of installation of distribution lines in Monterey, duties included plans and specifications for line, approval of contractor's estimates, etc. *TT 1.2: P 1.2: RC 1: D 0.2.*—July 1930 to date with Texas Constr. Co., Houston, Tex., in charge of engineering and inspection on several natural-gas projects in Texas, Louisiana and Mississippi. *TT 0.7: P 0.7: RC 0.7.*—*TT 8.2: SP 0.7: P 7.5: RC 3.2: D 0.2.* Refers to A. R. Alling, H. Culpeper, C. S. Foreman, N. A. Salgh, L. H. Schlom.

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(2) **HAMMOND, NEWTON LeROY**, Ware Road, Enfield, Mass. (Age 44. Born Newport, R. I.) Oct. 1904 to June 1908 Student, Civ. Eng. course, Massachusetts Inst. of Technology. *TT 2: P 2.*—Nov. 1908 to April 1909 Instrumentman, F. W. Bird & Sons, East Walpole, Mass., on paper and steam plant layout and installation. *TT 0.2: SP 0.2: D 0.2.*—May to Aug. 1909 Inspector, Town of Brookline, Mass., on storm-water sewer installation, including large concrete drain. *TT 0.3: SP 0.1: P 0.2: RC 0.2.*—Aug. 1909 to Nov. 1911 Asst. Engr., City of New Britain, Conn., part of time in charge of construction of large earth fill dam for water supply. *TT 2.3: P 2.3: RC 1.5.*—Nov. 1911 to Aug. 1919 with Massachusetts State Board of Health, until March 1915 as Prin. Asst. Engr. on surveys and construction on 16-mile improvement of Neponset River, then Asst. Engr., office calculations on stream flow, etc., and after June 1915 Engr. in Chg., Neponset River Improvement, on surveys, hydraulic studies, extensive swamp reclamation investigations, design of sewerage system for Ayer, Mass., etc. *TT 7.7: P 7.7: RC 6.6: D 3.5.*—Aug. 1919 to Jan. 1922 Asst. Engr., Massachusetts Joint Board of Water Supply Needs and Resources, on investigations, surveys and design of various water-supply projects, particularly Boston Metropolitan Dist. *TT 2.3: P 2.3: RC 2.3: D 1.*—Jan. 1922 to Dec. 1926 Asst. Engr., Massachusetts Dept. of Public Health, in charge of special legislative investigations for water supply, sewerage and drainage problems. *TT 4.9: P 4.9: RC 4.9: D 2.5.*—Dec. 1926 to date with Metropolitan Dist. Water Supply Comm., Boston, until June 1927 as Asst. Div. Engr. in charge of surveys and investigations for Swift River Reservoir, and since then Div. Engr. in charge of Swift River Reservoir Div. *TT 4.3: P 4.3: RC 4.3.*—*TT 2.4: SP 0.3: P 2.3.7: RC 19.8: D 7.2.* Refers to X. H. Goodnough, K. R. Kennison, J. W. Smith, A. D. Weston, F. E. Winsor.

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(7) **HAMPTON, SRYGLEY HALL**, 713 Cadillac St., Flint, Mich. (Age 33. Born Tracy City, Tenn.) Sept. to Dec. 1918 Private, U. S. Army, at Clemson Coll., S. C. (S. A. T. C.), being Topographical Draftsman and Mapmaker; also rated as Asst. Mine Foreman. *TT 0.1: SP 0.1.*—April 1919 to March 1923 Rodman, Recorder, Levelman, Translman Planetable Operator, Observer on triangulation and Draftsman on city mapping, R. H. Randall Co., Geodetic and Topographic Engrs., Toledo, Ohio. *TT 2: SP 2.*—April 1923 to date with City of Flint, Mich., until March 1926 as Draftsman on estimates, plans, assessments, etc., for sewers, pavements, sidewalks, etc., April 1926 to March 1929 Senior Sewer Engr., sewer inspection, design, layouts, systems, specifications, and since April 1929 Office Engr. in charge of plans, surveys, designs, estimates, specifications, inspection, right-of-way, etc. *TT 7: SP 1: P 6: RC 2: D 1.*—*TT 9.1: SP 3.1: P 6: RC 2: D 1.* Refer to D. W. Bingham, D. A. Decker, H. C. McClure, C. E. Palmer, J. R. Pollock, R. H. Randall.

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(9) **HARDING, GEORGE HOSKEN**, Box 321, R. R. No. 3, Louisville, Ky. (Age 28. Born Lenox, Ohio.) 1926 B. C. E., Ohio State Univ. *TT 4: P 4.*—July 1920 to June 1923 (co-operative work) with Cincinnati Traction Co., Union Gas & Elec. Co., and U. S. Engr. Dept. on Ohio River Dams Nos. 36 and 38. June 1923 to Sept. 1924 with Central Div., U. S. Engr. Office, assisting on design of hydraulic structures on Topography Route No. 3, Lake Erie to Ohio River Survey (proposed canal route). *TT 1.3: P 1.3.*—April 1926 to Nov. 1929 member of firm, Coulson & Harding Eng. Co., Cincinnati, Ohio, general engineering; surveying, mapping, design, construction, etc., including supervising construction of streets, sewers, grading, sidewalks, location of water, gas and electric utilities, etc. for subdivisions, hydraulic design of dam across Ohio River, design and supervision of construction of concrete streets and sidewalks, sewers, small sewage-disposal plants for subdivisions, checking plans for architects and contractors, aerial mapping, etc. *TT 3.7: P 3.7: RC 3.7: D 3.*—Dec. 1929 to date Member of Faculty, Depts. of Civ. Eng. and Mathematics, Speed Scientific School, Univ. of Louisville. *TT 1.3: P 1.3.*—*TT 10.3: P 10.3: RC 3.7: D 3.* Refers to W. L. Glazier, C. W. Kutz, R. E. Mackenzie, W. R. McIntosh, C. T. Morris, C. E. Sherman, W. B. Wendt.



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(9) **HARRELL, CHARLES ADAIR**, City Hall, Portsmouth, Ohio. (Age 37. Born Madison, Va.) 1914 A. B., Randolph-Macon Coll. 1920 M. A., Columbia Univ. 1924 C. E., Univ. of Cin. 1927 M. S. in Public Administration, Syracuse Univ. TT 4: P 4.—1924 to 1926 with Industrial Development Dept., Chamber of Commerce, Cincinnati, Ohio, on studies and surveys, including an extensive survey (\$35 000) of Cincinnati area. TT 1: SP 1.—1927 (6 months) with National Inst. of Public Administration, New York City, studying administration of education in State of New York, particularly physical school plants.—1928 and 1929 Asst. to City Mgr., Cincinnati, advising and directing departments (except Parks and Health) in their work, making studies and investigations, etc. TT 2: P 2: RC 2.—1930 to date City Mgr., Portsmouth, Ohio, directly responsible for engineering work on streets, sidewalks, sewers, intricate problems of flood-wall defense, water-works plant, etc. TT 1.2: P 1.2: RC 1.2.—TT 8.2: SP 1: P 7.2: RC 3.2. Refers to E. D. Gilman, H. H. Kranz, H. B. Luther, H. Schneider, C. O. Sherrill.

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(9) **HATCH, CHARLES EVERETT**, 530 Devon Pl., Toledo, Ohio. (Age 29. Born Corunna, Mich.) 1927 B. S. in Civ. Eng., Univ. of Mich. TT 4: P 4.—June 1919 to July 1920 and Sept. 1920 to May 1921 Rodman, Chainman, Instrumentman and Party Chf. on surveys, drainage, etc., with Geo. A. Meade Co., Flint, Mich. TT 0.8: SP 0.8.—May 1921 to May 1922 with Flint City Planning Comm., collected material for zoning maps and ordinances, drew maps. TT 0.5: SP 0.5.—Nov. 1922 to March 1923 with Wright & Wheat, Engrs., Detroit and Flint, as Party Chf. and later Chf. of all parties Modern Housing Corporation Development in Flint. TT 0.3: SP 0.3.—March 1923 to June 1927 (after Sept. 1923 while student) in private practice, surveys, subdivision development, etc. TT 0.4: P 0.4: RC 0.4.—June 1927 to May 1929 Senior Engr., City of Toledo, on analysis and design for Canal Boulevard super highway project, also design and supervision of 24-in. inverted syphon under river, special streets, dredging, triangulation, levels, etc. TT 2: P 2: RC 2: D 2.—May 1929 to date Engr., Lucas County Planning Comm., supervising metropolitan plan, promotion work, analysis and general design of special jobs, designing and handling changes in original plans and subdivisions and utilities, at present on design for entire metropolitan area. TT 1.8: P 1.8: RC 1.8: D 1.8.—TT 9.8: SP 1.6: P 8.2: RC 4.2: D 3.8. Refers to G. Champe, A. S. Forster, L. T. Owen, R. H. Randall, W. C. Sadler, A. H. Smith, R. S. Swinton, G. A. Taylor, G. D. Whitmore, C. O. Wisler, J. S. Worley.

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(3) **HOLROYD, NORMOND SCRIPTURE**, South Lake Ave., Troy, N. Y. (Age 27. Born Waterville, Conn.) 1929 C. E., Rens. Pol. Inst. TT 4: P 4.—March 1927 to June 1929 Engr. and Supt., Cummings Contr. Corporation, Gen. Contrs., Troy, N. Y., excavations, building construction, paving, etc., laying out and supervising work. TT 2.2: P 2.2: RC 2.2.—Jan. to April 1930 Eng. Draftsman, The Delaware & Hudson Co., Albany, N. Y., preparing plans for grade-crossing eliminations. TT 0.3: P 0.3: RC 0.3.—June 1929 to Jan. 1930 and April 1930 to date Engr. in Chg. of Constr. with Solomon & Kels, Cons. Engrs., Troy, N. Y., water-works, sewers, etc., laying out and supervising addition to water-works system, consisting of pipe line (2½ miles), filter plant, dam (511 ft. long, 30 ft. high), gate house, etc., erecting aeration plant, including pumping equipment, making surveys and plans for railroad grade-crossing elimination and (since April 1930) also laying out and supervising water-works system, consisting of pipe line (20 miles), erection of steel tank (100 000 gal.), drilling of two artesian wells, pumping station and aeration plant, also surveys for sewer and water-works systems and concrete and steel railway storage trestle. TT 1.6: P 1.6: RC 1.6: D 1.—TT 8.1: P 8.1: RC 4.1: D 1. Refers to E. R. Cary, F. J. Kels, P. C. Ricketts, W. W. Rousseau, H. O. Sharp, G. R. Solomon.

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(15) **HUBER, WILLIAM CALVIN**, Louisiana Highway Comm., Baton Rouge, La. (Age 23. Born Richmond, Ind.) 1929 B. S. in Civ. Eng., Purdue Univ. TT 4: P 4.—June-Dec. 1929 Inspector on levee construction and revetment work, with U. S. Engrs., Mississippi River Flood Control. TT 0.3: SP 0.3.—Jan.-May 1930 with Engr. Corps, M. of W. Dept., Missouri, Kansas, Texas R. R., Dallas, Tex. TT 0.2: SP 0.2.—June-Dec. 1930 Inspector of bridge construction, Missouri Highway Dept., Boonville, Mo. TT 0.2: SP 0.2.—Jan. 1931 to date Draftsman, Bridge Dept., Louisiana Highway Dept., Baton Rouge, La. TT 0.1: SP 0.1.—TT 4.8: SP 0.8: P 4. Refers to E. L. Erickson, W. K. Hatt, N. E. Lant, W. A. Russell, J. S. Waldrep.

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(8) **HUNTER, HARRY CLYDE**, 208 South LaSalle St., Chicago, Ill. (Age 41. Born Oelwein, Iowa.) 1913 B. S. in Civ. Eng., Iowa State Coll. TT 4: P 4.—June 1913 to date with American Bridge Co., until Oct. 1913 as Draftsman on detail drawings for steel bridges and



buildings; Oct. 1913-Sept. 1915 Timekeeper, keeping field costs and assisting Field Engr. on erection of large steel structures; Oct. 1915 to Oct. 1918 Field Engr. in charge of all field engineering for erection of large steel bridges, including Chicago, Burlington & Quincy Ry. bridge over Ohio River, Metropolis, Ill.; Oct. 1918 to Aug. 1922 Office Engr., and Aug. 1922-Dec. 1927 Asst. Engr., estimating costs, designing and planning equipment, false-work, etc., for steel structures, also (after Aug. 1922) having office supervision of erection, and since Jan. 1928 Div. Erecting Mgr. in general charge of erection of steel structures in Western Div. TT 16.5: SP 1.1: P 15.4: RC 15.4: D 12.4.—TT 20.5: SP 1.1: P 19.4: RC 15.4: D 12.4. Refers to O. F. Dalstrom, C. R. Harding, E. H. Heald, C. G. E. Larsson, A. F. Reichmann, E. J. Schneider, R. A. Van Ness.

## 317

(1) JAYASWAL, UMESH SINGH, Muzaffarpur, India. (Age 32. Born Mirzapur, India.) 1919 B. S., Patna Univ., India. 1922 B. S., Birmingham Univ., England. TT 4: P 4.—Summers 1920 and 1921 and July 1922 to Sept. 1926 with Braithwaite & Co., Engrs., Ltd., West Bromwich, England, engaged as follows: Summers 1920 and 1921 shop training; July 1922-Feb. 1923 in various departments, designing, estimating and drawing, including design of 60-ft. span plate girder railway bridge, 135-ft. span for pipe line and roadway, roof trusses, steel frame building (350 tons) (pavilion, Colwyn Bay) and strengthening pier on which it stands; March-Aug. 1923 on erection of pavilion; Nov. 1923-March 1924, July-Sept. 1924 and Feb.-May 1925 in charge of Estimating Dept., designing, estimating, pricing and drawing; April-June 1924, Oct. 1924-Jan. 1925 and June 1925-Sept. 1926 on erection of various jobs, Estimating Dept., including fixing double channel bracings in Strand Rd. Jetty No. 3, leveling, lining, plumbing, etc. for new offices, etc., erection of pressed steel tank (60 000 gal.) on tower 55 ft. high, etc. TT 3.1: SP 0.4: P 2.7: RC 1.4: D 0.8.—June 1927 to May 1928 Asst. Engr. on Upper Sone Bridge strengthening, East Indian Ry. TT 0.9: P 0.9.—June 1928 to date Dist. Engr., Muzaffarpur Dist. Board, in charge of 200 miles of metalled and 1 800 miles of unmetalled roads, many educational and medical buildings, etc. TT 2.8: P 2.8: RC 2.8.—TT 10.8: SP 0.5: P 10.3: RC 3.7: D 0.8. Refers to H. P. Budgen, R. E. Stradling. (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

## 318

(1) JUDSON, FREDERICK, 7920 Fourth Ave., Brooklyn, N. Y. (Age 24. Born Stockport, N. Y.) 1922 to 1924 Wireman's Helper, New York Telephone Co., wiring switchboards for installation of dial system. TT 0.6: SP 0.6.—1925 to 1926 Tester, Brooklyn Edison Co., regulating feeder voltages (3/10 year) and (1½ years) Eng. Clerk, Planning Div., Union Elec. Light & Power Co., planning and making layouts for main feeder lines, and loop test sheets and layouts for feeder repair. TT 0.9: SP 0.9.—1926 to 1927 Axeman, Grade A, Topographical Bureau of Highways of Brooklyn, on surveys, street repaving, etc. TT 0.4: SP 0.4.—1927 to date with Board of Water Supply, City of New York, until 1930 as Axeman, Grade B (over 9 months) and Rodman, Grades B and 3 (2 3/10 years), on computations, surveys, construction of water tunnels, acting as Inspector on high-pressure air work (45 pounds) sinking caisson, in charge of shaft form setting and of party on line and grade and cross-section work in tunnel, etc., and since 1930 Eng. Inspector, Grade 4, on water tunnel (1 week) and Transitman, Grade 4, in responsible charge of field party for line and grade in water tunnel, including steel lining, and Shaft Engr. in responsible charge of engineering for 7 000 ft. of concrete and steel-lined water tunnel. TT 2.1: SP 1.6: P 0.5: RC 0.3.—TT 4: SP 3.5: P 0.5: RC 0.3. Refers to H. R. Bouton, A. Dick, M. F. Freund, J. J. Murphy, B. Schwerin.

## 319

(1) KALLELIS, PETER SPIROS, 146-06 One Hundred Fourteenth Ave., Jamaica, N. Y. (Age 23. Born Peabody, Mass.) 1930 B. S., Mass. Inst. Tech. TT 4: P 4.—Summers 1927-1929 Transitman, Chf. of Party, Draftsman, etc., on surveys, with Town of Belmont (1927) and City of Peabody, Mass.—TT 4: P 4. Refers to H. K. Barrows, W. M. Fife, G. L. Hosmer, C. M. Spofford.

## 320

(15) KEESEE, GERALD BRUCE, Box 118, Brownwood, Tex. (Age 34. Born Topeka, Kans.) 1924 B. S. in C. E., Univ. of Kans. TT 4: P 4.—Summers 1921 and 1922 Timekeeper and June 1924 to March 1925 Estimator and preparing cost records on general construction with G. A. Dahlgren, La Junta, Colo. TT 0.7: P 0.7: RC 0.7.—Summer 1923 Draftsman, Kansas State Highway Dept.—March to Sept. 1925 Asst. Engr. with Lee F. Williams, Contr., Pueblo, Colo., designing forms and false work for concrete bridges, surveying, designing and estimating reservoir embankments. TT 0.5: P 0.5: RC 0.5: D 0.1.—Sept. 1925 to March 1926 Office Engr., with County Engr., Johnson County, Kans., on paying plans for Federal Aid projects. TT 0.5: P 0.5: RC 0.5: D 0.5.—March to June 1926 City Engr., Olathe,

Kans., supervising construction of pavement and sewers and drafting new city map. *TT 0.2: P 0.2: RC 0.2.*—June 1926 to Jan. 1927 Res. Engr., Devlin Eng. Co., Amarillo, Tex., supervising construction of sewers and water systems in Knox City and Hale Center, Tex., and Toronto, Kans. *TT 0.6: P 0.6: RC 0.6.*—Aug. to Nov. 1927 Engr., City of Brownwood, Tex., constructing aerial map and drafting new city map. *TT 0.3: P 0.3: RC 0.3.*—Nov. 1927 to Feb. 1928 Asst. Engr. with Myers, Noyes & Forrest, Dallas, Tex., surveys for pavement, Arlington, Kans., and estimates for irrigation system. *TT 0.2: P 0.2.*—Feb. to May 1928 Office Engr., St. Louis & South Western R. R., Mt. Pleasant, Tex., preparing profiles and estimates of main-line revision, Mt. Pleasant to Tyler, Tex. *TT 0.3: P 0.3: RC 0.3.*—May to Dec. 1928 Office Engr., Bexar, Medina and Attoscosa Counties, Water Improvement Dist. No. 1, Natalia, Tex., planning and designing irrigation structures and canals, preparing subdivision maps. *TT 0.6: P 0.6: RC 0.6: D 0.3.*—Jan. to Aug. 1927 Office Engr., designing and preparing plans and estimates for reservoir embankment and distribution system for irrigation and city supply, and Dec. 1928 to date Prin. Asst. Engr., in charge of reservoir surveys and maps, designing and preparing plans, estimates and specifications for reservoir dam, canal and distribution system for irrigation and city water supply, all for Brown County Water Improvement Dist. No. 1, Brownwood, Tex. *TT 2.9: P 2.9: RC 2.9: D 2.9.*—*TT 10.8: P 10.8: RC 6.6: D 3.8.* Refers to R. A. Finney, H. A. Rice, D. W. Ross, E. M. Spencer, J. L. Starkie, R. A. Thompson, P. A. Welty.

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(5) **KEY, CLYDE CICEL**, 2037 Guilford Ave., Baltimore, Md. (Age 35. Born Wichita, Kans.) 1918 B. S. in C. E., Kans. State Agri. Coll. *TT 4: P 4.*—June 1918 to Aug. 1919 Sergeant, First Class, U. S. Army, on construction of American docks and maintenance of Base Sec. No. 2, Bordeaux, France, including water-supply system. *TT 1.1: P 1.1.*—Sept. 1919 to March 1920 Asst. Testing Engr., State of Kansas, testing highway materials. *TT 0.6: P 0.6.*—March 1920 to June 1921 Office Engr., C. R. Nichols Constr. Co., Wichita Falls, Tex., on design and construction of 42-mile sewer. *TT 1.1: P 1.1: RC 0.6: D 0.5.*—June 1921 to May 1922 Sub-Contr., concrete work, Wichita, Kans. *TT 0.8: P 0.8: RC 0.8.*—May 1922 to Sept. 1923 Constr. Engr., in charge of building oil refineries, until Jan. 1923 with Derby Oil Co., Wichita, then with Shelly Oil Co., Eldorado, Kans. *TT 1.3: P 1.3: RC 1.3.*—Sept. 1923 to Jan. 1924 Instrumentman with Black & Veatch, Kansas City, Mo., on survey of water supply at Casper, Wyo., and of highway in Kansas. *TT 0.3: P 0.3: RC 0.3.*—June 1924 to Nov. 1927 Constr. Supt. with J. Henry Miller, Inc., Baltimore, Md., building schools, apartment houses, filtration plants and office buildings. *TT 3.5: P 3.5: RC 2.5.*—Nov. 1927 to date Dist. Supt., North Eastern Constr. Co., Baltimore, directing construction of schools, office building, garages, government work, Washington, D. C., new reptile house, National Zoo Park. *TT 3.2: P 3.2: RC 3.2.*—*TT 15.9: P 15.9: RC 8.7: D 0.5.* Refers to F. W. Austin, L. E. Conrad, F. F. Frazier, A. H. Krone, H. H. Marsh, C. A. Wellner, W. M. Wolfe.

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(7) **LANGE, WILLIAM HOBART**, 917 Fourth St., West DePere, Wis. (Age 34. Born West DePere, Wis.) Sept. 1914 to Feb. 1916, Sept. 1916 to June 1917 and Feb. to June 1920 student in Civ. Eng., Univ. of Wisconsin. *TT 1.5: P 1.5.*—Summer 1914 Rodman on surveys, with L. L. Braun.—Summer 1915 Foreman with O. O. Sweet, Contr., Rhineland, Wis., on small concrete bridges and culverts, Green Bay, Wis.—March to Sept. 1916 Instrumentman and Computer, Green Bay & Western R. R., on valuation surveys and construction, in charge of earthwork and track valuation. *TT 0.2: SP 0.2.*—June to Oct. 1917 Res. Engr., Wisconsin Highway Comm., and County Engr., Shawano County, on plans, surveys and construction of highways. *TT 0.3: P 0.3.*—Oct. 1917 to Jan. 1918 Transitman and Acting Res. Engr., Middle & South Fork R. R., Southeastern Kentucky, in charge of location and some construction. *TT 0.2: P 0.2.*—Jan. 1918 to July 1919 with Engrs., U. S. Army, as Private and after July 1918 2d Lieut. in charge of repair of highways in France, resurfacing, etc. *TT 1.2: SP 0.2: P 1: RC 1.*—July to Sept. 1919 and March 1921 to Jan. 1928 with Wisconsin Highway Comm., Green Bay, until Sept. 1919 as Res. Engr. on road and bridge construction, and after March 1921 Asst. Div. Engr. in charge of surveys, plans, design, construction and (1½ years) division maintenance (construction and design of approx. 300 miles of road with bridges and paving). *TT 7: P 7: RC 6.7: D 4.*—Sept. 1919 to Feb. 1920 Res. Engr., Minnesota State Highway Dept., in charge of construction of highway (23 miles) in Meeker County, also plans, surveys and design of proposed work (22 miles). *TT 0.5: P 0.5: RC 0.5: D 0.5.*—June 1920 to March 1921 Res. Engr. for Constr. Q. M., U. S. Army, in charge of construction and grading, railroads, foundations, sewers, lights, water and streets (approx. \$600 000), 8th Corps Area Supply Depot, San Antonio, Tex. *TT 0.8: P 0.8: RC 0.8: D 0.3.*—Jan. 1928 to date Salesman and Constr. Engr., Bark River (Mich.) Bridge & Culvert Co., sales work and design of drainage layouts for perforated bow-pipe culverts, storm sewer designs and jacking of corrugated culverts through embank-

ments. TT 2.2: SP 1: P 1.2: D 0.7.—TT 1.4: SP 1.5: P 12.5: RC 9: D 5.5. Refers to J. Donohue, G. E. Hill, H. J. Kuelling, G. W. Langley, Jr., J. R. McLean, O. C. Rollman, N. A. Saigh, M. W. Torkelson, F. E. Turneaure.

## 323

(1) LECUNA, VICENTE RAMON, Reducto a Miranda No. 59, Caracas, Venezuela. (Age 22. Born Caracas, Venezuela.) 1929 B. S., Mass. Inst. Tech. 1930 Dr. of Physical and Mathematical Sciences, Central Univ., Caracas, Venezuela. TT 4: P 4. Refers to J. J. Collins, L. M. Gray, T. Human, Jr., J. A. Mullin, J. R. Stubbins.

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(5) LINDNER, CLEMENT PEARL, 613 Redgate Ave., Norfolk, Va. (Age 29. Born Prairie du Chien, Wis.) 1925 B. S., Coll. of Eng., Univ. of Wis. TT 4: P 4.—1925 to 1927 Instructor in Hydr. Eng., Univ. of Wisconsin, in laboratory and class-room; summers (1924 to 1926) with Prof. R. S. Owen as Surveyor and teaching surveying in summer camp. TT 2: P 2.—1927 to 1929 Hydr. Engr., Consumers Power Co., Jackson, Mich., on power and operation studies, maintenance of hydro-electric plants, etc. TT 1.7: P 1.7: RC 0.8.—1929 to date Asst. Civ. Engr. and Associate Civ. Engr., Corps of Engrs., U. S. Army, until 1931 at Washington, D. C., on power studies and assisting on investigations of streams for navigation, power, flood control and irrigation, and at present with Div. Engr. at Norfolk, Va., reviewing reports on same. TT 2.2: P 2.2: RC 2.2.—TT 9.9: P 9.9: RC 2.9. Refers to B. Bird, W. S. Fitzsimons, T. A. Forbes, D. W. Mead, B. B. Somervell, J. G. Staack, L. F. Van Hagan.

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(8) McCUNE, SAMUEL, 642 North Ashland Ave., LaGrange, Ill. (Age 23. Born Belfast, Ireland.) 1930 B. S. in Civ. Eng., Univ. of Ill. TT 4: P 4.—May to Nov. 1926 Instrumentman, Lake Michigan Riviera Co., on surveying and mapping 1 000-acre lakeside development, highway construction, river straightening, etc. TT 0.2: SP 0.2.—Jan. 1927 to Jan. 1928 Instrumentman, Turner Constr. Co., New York City, line and grade for steel and reinforced concrete work on reconstruction of Western Elec. Co.'s cable plant in Chicago, Ill. TT 0.5: SP 0.5.—Nov. 1930 to date Bridge Draftsman, Atchison, Topeka & Santa Fe R. R., drafting and designing on steel bridges. TT 0.2: SP 0.2.—TT 4.9: SP 0.9: P 4. Refers to H. Cross, W. C. Huntington, T. C. Shedd.

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(11) McDONALD, CHARLES CASTO, Care, U. S. Geological Survey, Tucson, Ariz. (Age 23. Born Alpine, Tenn.) 1929 B. S. in C. E., Univ. of N. Mex. TT 4: P 4.—July 1929 to Feb. 1930 Structural Steel Detailer, American Bridge Co., Gary, Ind. TT 0.3: SP 0.3.—March 1930 to March 1931 Jun. Hydr. Engr., U. S. Geological Survey, Arizona Dist. TT 0.5: SP 0.5.—TT 4.8: SP 0.8: P 4. Refers to D. H. Barber, W. E. Dickinson, A. Diefendorf, J. S. Gatewood, H. C. Pritchett.

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(10) McGEE, JAMES HERMAN TAYLOR, Box 95, Everglades, Fla. (Age 26. Born Center, Miss.) 1929 graduate, International Correspondence School.—Sept. 1920–Nov. 1921 and Sept. to Dec. 1923 with L. S. Russell, Contr. Engr., successively as Rodman and Chainman, Instrumentman on drainage and highway work and (after Sept. 1923) Asst., being Chf. Engr. on municipal work at Everglades, Fla. TT 0.7: SP 0.7.—Dec. 1923–Aug. 1924 Instrumentman, and Sept. 1924 to Oct. 1926 Asst. to County Engr. on highway location and construction, Collier County, Fla. TT 1.9: SP 0.8: P 1.1.—Oct. 1926–Nov. 1929 Jun. Engr., City Eng. Dept., Birmingham, Ala., on studies and investigations of drainage project (\$8 000 000) and (after Oct. 1928) in Div. No. 1, on paving, sewers, etc.; designed storm sewer system (\$1 000 000). TT 3.1: P 3.1: D 0.5.—Jan. 1930 to date with Florida Development Co., on general engineering. TT 1.2: P 1.2.—TT 6.9: SP 1.6: P 5.3: D 0.5. Refers to M. B. Garris, G. P. Morrill, F. J. Nebiker, M. Nicholson, L. G. Schreffler.

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(4) MAY, JOHN WALTER, 469 Hampshire Road, Drexel Park, Pa. (Age 46. Born Philadelphia, Pa.) 1900 to 1913 Supt., with Albertson & Young Co. (9 years), and Lane Constr. Co. (4 years), Atlantic City, N. J., construction of lighting-power, switchboard, telephone systems in amusement piers, hotels, armory, ice plant, churches, banks, theatres, etc., and of electric-power plant, gas-generator house, buildings, sewers, sea-walls, sewage-disposal plant, sedimentation tanks, installation of air mains, air ejectors and force mains (below water levels), involving foundations, brick masonry, reinforced concrete, structural steel, reinforced concrete floors, piling and underpinning. TT 10.2: SP 2.8: P 7.4: RC 7.4: D 2.—1913 to 1918 Mgr. of Constr. for George B. Clopp, Philadelphia, on estimates, design and construction of concrete structures and elevated railroad, including reinforced concrete roofs over pump house and over twin reservoirs, service building, roof slab and suspended



ornamental ceiling construction for theatre, consultation on Frankford Arsenal, concrete tunnels, accumulator pits below water level; Frankford Elevated Ry. structure, Philadelphia, including concrete columns, column bases, reinforced concrete foot walks, paving, curbing, sidewalk, railings, drains, design of special construction equipment. *TT 6: P 6: RC 6: D 2.*—1918 to 1923 Gen. Supt., Day & Zimmermann Eng. & Constr. Co., being Constr. Supervisor on construction of U. S. Quartermaster terminal (\$12 000 000 warehouse, and river pier project) on Delaware River, Philadelphia, with additional concrete pier, construction of boiler, power and generating plants for U. S. Finishing Co., of power plant, concrete water-storage dam at Saxton, Pa. and two substations and two 110-kv. steel tower transmission lines for Penn Central Light & Power Co. (\$6 638 000), of hydro-electric power plant, and installation of two 20,000 h. p. turbines with auxiliary equipment and two 110-kv. two-circuit steel tower transmission lines at Holtwood, Pa. (\$2 100 000) for Pennsylvania Water & Power Co., manufacturing plant (\$1 511 000) for American Type Founders Co. at Elizabeth, N. J., office and factory building of steel, brick and concrete boiler house, sidings, installation of boilers, etc., construction of outdoor switching-station and installation of equipment on roof of hydro-electric plant, Conowingo, Maryland, construction 60 miles of two single-circuit 220-kv. steel tower transmission lines for Philadelphia Elec. Co., and of substations, power plants, transmission lines, switching-stations, warehouses, schools, various buildings, additions to power plants, hospitals, installation of boilers, turbo-generators for various power and light companies, Board of Directors of City Trusts, traction companies, public service companies, hospitals, etc. (total \$40 600 000). *TT 10: P 10: RC 10.*—1923 to date Gen. Supt., and Constr. Mgr., United Engrs. & Constr., Inc., on construction of college dormitories, transmission lines, power plants, school buildings, substations, submarine cable crossing between Deepwater Point, N. J. and Pigeon Point, Del. for United Gas Improvement Co. and an outdoor substation for American Gas & Elec. Co., Pennsylvania R. R. terminal improvements, State penitentiary at Graterford, Pa., including installation of sewage disposal, water supply and power plant (total over \$14 000 000). *TT 3: P 3: RC 3.*—(all work given in detail in application.)—*TT 29.2: SP 2.8: P 26.4: RC 26.4: D 4.* Refers to L. L. Calvert, F. O. Dufour, R. Farnham, J. W. Moffett, C. H. Stevens, T. P. Watson.

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(12) MEYER, PAUL EUGENE, 204 Rutherford Court, Aberdeen, Wash. (Age 30. Born Quincy, Ill.) 1919 to 1925 (83 hrs. credit) student in Eng., State Univ. of Washington.—1910 to 1918 (while student) Handyman with his father, C. Meyer, Contr. and Bldr., Quincy, Ill.—May to July 1918 and Nov. 1919 to Jan. 1920 Chairman successively with Chicago, Burlington & Quincy R. R., and English Lumber Co., McMurray, Wash. *TT 0.2: P 0.2.*—Aug. to Nov. 1918 with Engrs., U. S. Army. *TT 0.1: SP 0.1.*—April to Dec. 1921 Rodman, and May to July 1922 Levelman, Washington State Highway. *TT 0.7: SP 0.1: P 0.6.*—Jan. to May 1922, Sept. to Dec. 1923, April to Dec. 1924 and June to Sept. 1925 Draftsman, until April 1922 with Grays Harbor Iron & Machine Works, Aberdeen, Wash., and Sept. to Dec. 1923 with Elec. Wheel Co., Quincy, Ill., on machine design and remainder of time with Donovan Corkery Logging Co., Aberdeen, on machine design survey, location, transit work, etc. *TT 1.4: P 1.4: D 0.5.*—Feb. 1926 to Dec. 1929 Asst. to Chf. Engr. and Chf. Engr., Hobl Timber Co., Aberdeen, on construction, in charge of logging railroad development on Quinalt Indian Reservation. *TT 3.8: P 3.8: RC 3.2.*—Dec. 1929 to Aug. 1930 Engr. and Constr. Supt., on Grays Harbor Pacific R. R., Aberdeen, logging main line to tide water. *TT 0.7: P 0.7: RC 0.7: D 0.7.*—Aug. 1930 to date Engr., construction, Saginaw Logging Co., Aberdeen. *TT 0.6: P 0.6: RC 0.6: D 0.6.*—*TT 7.6: SP 0.4: P 7.2: RC 4.5: D 1.8.* Refers to L. F. Heuperman, S. Murray, F. H. Richardson, L. H. Rubicam, P. E. Thian

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(16) MORGAN, AUSTIN, Lebo, Kans. (Age 27. Born Lebo, Kans.) 1930 B. S. in Civ. Eng., Kans. State Agri. Coll. *TT 4: P 4.*—June to Aug. 1924 Chairman, and Feb. 1925 to Sept. 1926 Draftsman with City Engr., Topeka, Kans., on street paving, sidewalks, sewers, topographic mapping, etc. *TT 0.9: SP 0.9.*—Aug. to Nov. 1924 Chairman, Atchison, Topeka & Santa Fe Ry. *TT 0.1: SP 0.1.*—Dec. 1924 to Feb. 1925 Draftsman, Kansas Inspection Bureau, Topeka, on plats of small town. *TT 0.1: SP 0.1.*—Sept. 1926 to June 1930 (vacations and while student) Draftsman with Supt. of Maintenance, Kansas Agricultural Coll., Manhattan, Kans., on street paving, sewers, grading, small buildings and bridges. —June 1930 to date Chf. of Party or Field Engr., Phillips Petroleum Co., Bartlesville, Okla., on concrete bases for heavy engines and distillation equipment, bench levels, surveys for pipe and telephone lines, well locations, etc. *TT 0.7: P 0.7.*—*TT 5.8: SP 1.1: P 4.7.* Refers to L. E. Conrad, E. R. Dawley, F. F. Frazier, M. W. Furr, C. H. Scholer, L. V. White.



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(4) MORRIS, THEODORE, 6251 Wister St., Philadelphia, Pa. (Age 25. Born Vineland, N. J.) 1926 B. S. in C. E., Univ. of Pa. TT 4: P 4.—July 1926 to June 1928 with Mountain Water Supply Co., Philadelphia, Pa., as Draftsman and Inspector on pumping stations, filter plants, pipe lines, dams, reservoirs, etc. TT 1: SP 1.—June 1928 to Feb. 1930 Engr. with Harrison, Mertz & Emlen, Inc., Germantown, Philadelphia, in charge of surveys, line and grade for construction, and assisted on design of sewage-disposal plants. TT 1.7: P 1.7: RC 1.2.—Feb. 1930 to date Asst. Engr., Water Service Dept., Pennsylvania R. R., Philadelphia being Resident on pumping and softening plants, investigation and design, railroad watering facilities. TT 1.1: P 1.1: RC 1.1.—TT 7.8: SP 1: P 6.8: RC 2.3. Refers to J. H. Brown, Jr., W. H. Chorlton, W. S. Pardoe, J. A. Russell, E. R. Winkler, Jr.

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(7) MORTENSON, MYRON, 507 Hill St., Ann Arbor, Mich. (Age 25. Born Pinckney, Mich.) 1931 B. S. in C. E., Univ. of Mich. TT 4: P 4.—Summers 1929 and 1930 with Michigan State Highway Dept., successively as Rodman, and Instrument Reader for strain gauge on pavement tests.—TT 4: P 4. Refers to L. M. Gram, W. S. Housel, C. O. Wisler.

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(13) NELSON, WALDEMAR JAMES, Kanab, Utah. (Age 32. Born Verona, N. Dak.) March 1915–Oct. 1917 Chainman and Rodman, until Nov. 1916 with C. G. Burnett, Escalon, Cal., then with Tidewater & Southern R. R. Co. TT 1.3: SP 1.3.—Nov. 1917 to June 1918 with S. E. Latz, Modesto, Cal., as Levelman and Supt., leveling land for irrigation. TT 0.3: SP 0.3.—June to Dec. 1918 Private and Sergeant, 4th Co., A. R. D., C. A. C., U. S. Army.—Jan. 1919–April 1926 with California Highway Comm., one year as Rodman and Levelman on surveys, then Chf. of Party and Asst. Res. Engr. on surveys, staking highway construction, enforcing contract specifications, inspection and control of materials on highway grading and paving, engineering reports and cost records. TT 6.8: SP 0.5: P 6.3: RC 6.3.—June 1926 to date (except Aug. 1926 to May 1927 Mgr.-Owner of a hotel) with U. S. Bureau of Public Roads, until Aug. 1926 as Inspector in responsible charge of concrete paving, design and control of materials for concrete, May to July 1927 Chf. of Party on surveys, July 1927 to May 1928 Asst. Res. Engr. inspecting asphaltic macadam paving, in charge of construction of concrete drainage structures and field office accounting and engineering reports, and since May 1928 Res. Engr., Dist. 2, on highway construction, grading, paving and drainage structures; winters on highway construction design and cost estimates. TT 4.1: P 4.1: RC 4.1: D 0.9.—TT 12.5: SP 2.1: P 10.4: RC 10.4: D 0.9. Refer to S. T. Corfield, S. V. Cortelyou, A. N. George, D. L. MacBeath, W. H. Smith, C. H. Sweetser.

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(7) OAKLAND, GODFREY LYON, 202 Old Capitol Bldg., St. Paul, Minn. (Age 30. Born Cheyenne Agency, S. Dak.) 1930 B. S. of C. E., S. Dak. State School of Mines. TT 4: P 4.—July 1930 to date Jun. Hydr. Engr., U. S. Geological Survey, on stream gauging. TT 0.7: P 0.7.—TT 4.7: P 4.7. Refers to E. D. Dake, J. C. Rathbun, E. V. Willard.

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(11) OLMAN, SAMUEL, 4621 South Normandie Ave., Los Angeles, Cal. (Age 25. Born New York City.) 1929 B. S. in Eng., and 1930 M. S. in Civ. Eng., Cal. Inst. Tech. TT 4: P 4.—1929 to 1930 (while student) taught descriptive geometry and was Field Asst. on surveys, California Inst. of Technology.—June 1930 to date Asst. Res. Engr., California State Bridge Dept., on bridge construction. TT 0.7: P 0.7.—TT 4.7: P 4.7. Refers to R. R. Martel, W. W. Michael, F. Thomas.

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(3) PANUZIO, FRANK LOUIS, 514 East Buffalo St., Ithaca, N. Y. (Age 23. Born Bridgeport, Conn.) 1930 C. E., Cornell Univ. TT 4: P 4.—Nov. 1930 to date Graduate Research Student in Hydraulics, Cornell Univ.—TT 4: P 4. Refers to C. C. Cooman, E. W. Schoder, L. C. Urquhart.

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(4) PENSON, FREDERICK HOWARD, 3412 Spring Garden St., Philadelphia, Pa. (Age 28. Born Cheltenham, Pa.) 1924 B. S. in C. E., Drexel Inst. TT 4: P 4.—July 1924 to June 1925 Field Party Chf. with Remington & Vosbury, Camden, N. J., drafting, plans, grades, computations, etc. TT 1: P 1.—July to Nov. 1925 Engr., Keystone State Constr. Co., Philadelphia, Pa., in charge of setting granite stonework on Philadelphia anchorage of Delaware River Bridge. TT 0.4: P 0.4: RC 0.4.—Dec. 1925 to April 1927 with Reading R. R., on construction of Port Richmond grain elevator, being Inspector and Field Party Chf., drafting; designed sewer and underdrainage systems and (6 months, nights) Engr. in charge of operations, computations, reports and soundings. TT 1.4: P 1.4: RC 0.8: D 0.1.—May 1927 to date Research Engr. with Simon & Simon, Archts., Philadelphia, on studies and investigation for building projects, study and reports on layout and space requirements for office

buildings; analysis of data and report on expansion program of large textile machinery works, collaborated on treatise on height of buildings on urban land, in charge of surveys, computations and layout of final designs of 200-acre memorial park (cemetery). *TT 3.9: P 3.9: RC 0.8: D 0.2.—TT 10.7: P 10.7: RC 2: D 0.3.* Refers to J. L. Cozzens, H. Delaplaine, J. B. Myers, J. C. Remington, Jr., S. M. Swaab.

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(10) **RENSHAW, CLAUDE ARTHUR**, 844 Ocean Drive, Miami Beach, Fla. (Age 40. Born Inwood, Iowa.) 1913 B. of Eng., State Univ. of Iowa. *TT 4: P 4.—*April to Sept. 1913 Asst. County Engr., Musselshell County, Mont. *TT 0.3: SP 0.3.—*Sept. 1913 to Feb. 1925 in private practice, designed and supervised construction of water system for Ryegate, water extensions and street work for Harlowton, Mont., numerous small irrigation projects, etc. (total approx. \$500 000); also Sept. 1913 to March 1914 Associate Engr. with E. J. Parkinson, Winnett, Mont., on complete survey and preliminary report on Dead Man's Basin Irrigation Project in Montana, involving proposed irrigation of approx. 40 000 acres, Sept. 1913 to Jan. 1915 Acting County Engr., Musselshell County, Mont., in charge of bridge and road design and construction (approx. \$100 000), Sept. 1913 to July 1918 City Engr., Roundup, Mont., designed and supervised construction of water-works, pavement, White Ways, storm and sanitary sewers, etc. (approx. \$350 000), July to Dec. 1918 with Engr. Corps, U. S. Army, discharged as First Lieut. of Reserves, and April 1919 to Feb. 1925 Mayor of Roundup, Mont. *TT 11.5: P 11.5: RC 11.5: D 11.5.—*Sept. 1925 to date City Mgr. Miami Beach, Fla., responsible for final approval of plans and general supervision of construction of approx. \$5 000 000 worth of public improvement works; 1927 also Chairman of Dade County Ocean Front Protection Comm., supervising design of approx. \$3 000 000 worth of ocean-front protection works and construction of \$300 000 worth of same. *TT 5.6: P 5.6: RC 5.6: D 5.6.—TT 21.4: SP 0.3: P 21.1: RC 17.1: D 17.1.* Refers to J. P. Duffy, V. Gelineau, E. R. Neff, C. S. Nichols, M. Pirnie, R. W. Reed, G. W. Simons, Jr.

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(15) **SCHMID, ALBERT DARWIN**, 3038 Green St., Ft. Worth, Tex. (Age 29. Born Brenham, Tex.) 1925 B. S. in Civ. Eng., Tex. A. & M. Coll. *TT 4: P 4.—*July to Nov. 1925 and April 1928 (1 week) with Washington County Highway Dept., Brenham, Tex., as Transitman on highway location, plans, etc., about 2 weeks drafting, and (April 1928) working up survey and detail field information for 600-ft. concrete-pile bridge. *TT 0.3: P 0.3: RC 0.2.—*Nov. 1925 to Jan. 1928 with Marland Oil Co. of Texas, Ft. Worth, Tex., successively as Draftsman, Transitman, Chf. of Field Party on oil-well locations and land surveying in Panhandle oil field, and (finally) in office on design. *TT 2.2: P 2.2: RC 1.2: D 1.—*Jan. to March 1928 with United Producers Pipe Line Co., Ft. Worth, in charge of field party on pipe-line survey (150 miles). *TT 0.2: P 0.2: RC 0.2.—*Sept. 1928 to date Asst. Office Engr., Texas State Highway Dept., until Feb. 1929 designing and drafting special skew culverts, bridges and highway plans for Grayson County Highway Dept.; Feb. to Oct. 1929 in charge of field party on construction of Sherman-Howe and Denison-Madill projects, dirt work and bridges; Oct. 1929 to Aug. 1930 in office on bridge design; since Aug. 1930 designing, drafting, calculating, plans, estimates and some field work. *TT 2.5: P 2.5: RC 0.7: D 1.8.—TT 9.2: P 9.2: RC 2.2: D 2.8.* Refers to D. H. Askew, G. A. Bracher, W. D. Dockery, F. E. Lovett, J. T. L. McNew, J. J. Richey, J. G. Rollins, C. E. Sandstedt, M. C. Welborn.

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(5) **SMITH, PAUL ALBERT**, U. S. Coast and Geodetic Survey, Washington, D. C. (Age 30. Born Morning Sun, Iowa.) 1924 B. S. in Geodesy and Surveying, Univ. of Mich. *TT 4: P 4.—*Aug. 1924 to Feb. 1927 and April 1927 to date with U. S. Coast and Geodetic Survey, engaged as follows: Aug. 1924 to March 1925 Observer and Recorder on triangulation in South Dakota and Texas and (2 months) office work in Washington, D. C.; March 1925 to Feb. 1927 Second and First Officer, Ship *Hydrographer*, on hydrographic and topographic surveys on Gulf Coast of Florida, in charge of subparties (under inspection of Chf. of Party); April to Oct. 1927 Asst. to Officer-in-Chg. of subparty on hydrographic and topographic survey of Nuka Bay, Alaska; since Oct. 1927 Jun. Hydrographic and Geodetic Engr., 6 months on design of alterations to launch *Wildcat*; May 1928 to Feb. 1929 Officer in Chg. of subparty on survey of Sitkalidak Strait, Kodiak Island, Alaska, and (after Oct. 1928) on office work in Seattle, Wash.; Feb. to July 1929 at Washington, D. C., on office computations, etc., and July 1929 to Jan. 1930 Asst. to Chf. of Party, first order triangulation on Mississippi River between Cairo, Ill., and New Orleans, La.; since Jan. 1930 Chf. of Party on first order triangulation in eleven states; also Disbursing Officer for expenditures of party. *TT 6.6: P 6.6: RC 1.6: D 0.5.—TT 10.6: P 10.6: RC 1.6: D 0.5.* Refers to H. Bouchard, W. Bowle, H. W. Hemple, C. T. Johnston, T. J. Mitchell, W. D. Patterson.

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(9) **STRONG, CHARLES CYPRIAN**, 2d, 3400 Terminal Tower, Cleveland, Ohio. (Age 45. Born Detroit, Mich.) 1902-1905 student, Yale Coll.—1908 to 1912 Rodman, Chairman and Instrumentman on construction for various railroads. *TT 2: SP 2.*—1912 to June 1915 with Louisville & Nashville R. R., as Instrumentman on construction and (after Jan. 1913) Res. Engr. on completion of Cumberland River bridge at Nashville, Tenn., in charge of grade reduction on main line and of dredging at Pensacola, Fla., also concrete wharf at Danville, Tenn. *TT 3: SP 0.5: P 2.5.*—June 1915 to Nov. 1916 Draftsman, Nashville, Chattanooga & St. Louis Ry., and Computer, I. C. C. *TT 0.7: SP 0.7.*—Nov. 1916 to Jan. 1919 Res. Engr., Richmond (Va.) Terminal Ry., in charge of construction of passenger terminal for Richmond, Fredericksburg & Potomac and Atlantic Coast Line R. Rs., involving grading, tracks, sewers, heating, lighting, interlocking and buildings. *TT 2.1: P 2.1: RC 2.1.*—Jan. 1919 to July 1929 with Chesapeake & Ohio Ry., Richmond, until Sept. 1920 as Corporate Asst. Engr. supervising expenditures during Federal control, then (7½ years) Asst. Engr. in charge (under Chf. Engr.) of construction, also on investigations, reports and special assignments, and after July 1928 Insurance Engr. appraising all building on system, preparing claim papers and settling with insurance adjusters in fire loss cases. *TT 10.5: P 10.5: RC 10.5: D 2.*—July 1929 to date Insurance Engr., C. & O. Ry. and Pere Marquette Ry., Cleveland, Ohio, in charge of appraising values and adjusting fire losses. *TT 1.7: P 1.7: RC 1.7.*—*TT 20: SP 3.2: P 16.8: RC 14.3: D 2.* Refers to L. B. Allen, A. C. Copland, H. Frazier, W. J. Harahan, E. M. Hastings, C. W. Johns, W. Michel.

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(12) **TOWER, MILES LELAND**, Alcoy Apartments, Great Falls, Mont. (Age 36. Born Sioux City, Iowa.) 1911 to 1912 Chairman and Rodman, and 1914 to 1915 Instrumentman, being Engr. in charge of drainage of Davis Lake near Morton, Wash., for Stiley & Emery, Cons. Engrs. *TT 1: SP 1.*—1912 to 1914 Instrumentman, Chicago, Milwaukee & St. Paul Ry. Co. *TT 1: SP 1.*—1915 to 1918 and 1924 to 1928 Cons. Engr., Morton, logging and sawmill engineering, etc. *TT 7: P 7: RC 7: D 2.*—1918 to 1921 Mgr. and Operator, Tower Lumber Co., Morton, in charge of three sawmills and logging camps. *TT 3: P 3: RC 3: D 1.*—1921 to 1924 with Long-Bell Lumber Co., first as Instrumentman and finally Dist. Engr., last year had charge of improvement work (over \$150 000). *TT 3: P 3: RC 1: D 0.5.*—1928 to 1930 with Anaconda Copper Co., Butte, Mont., making special reports on lumber industry designing improvements and modernizing plants and logging camps. *TT 0.7: P 0.7: RC 0.7: D 0.7.*—1930 to date Asst. County Engr., Cascade County, Mont., in charge of road surfacing, including paving, oiling, testing laboratory, also bridges. *TT 0.9: P 0.9: RC 0.9: D 0.9.*—*TT 16.6: SP 2: P 14.6: RC 12.6: D 5.1.* Refers to C. E. Atwood, F. G. Birch, A. H. Labsap, K. C. McFarland, A. V. McIver, F. Scotten, R. H. Willcomb.

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(4) **VAN CAMP, PAUL MILTON**, 239 Kings Highway East, Haddonfield, N. J. (Age 35. Born Fine View, N. Y.) 1920 C. E., Cornell Univ. *TT 4: P 4.*—July 1920 to May 1921 Draftsman with F. H. Trimble, Archt., Orlando, Fla. *TT 0.4: SP 0.4.*—May to Dec. 1921 Supt., Constr. Dept., North China Mission of Methodist Episcopal Church, on design and construction of churches, schools, hospitals, residences, etc. *TT 4.5: P 4.5: RC 4.5: D 4.5.*—Dec. 1925 to Oct. 1926 Draftsman with Jas. Gamble Rogers, Archt., New York City, and (after July 1926) Monmouth County Highway Dept., Red Bank, N. J. *TT 0.4: SP 0.4.*—Oct. 1926 to Dec. 1927 Res. Engr., until May 1927 with Borough of Red Bank, on iron-removal plant, then with Waldo S. Coulter, New York City, on extension of sewage-treatment plant, Spring Valley, N. Y. *TT 0.9: SP 0.3: P 0.6: RC 0.6.*—Dec. 1927 to May 1928 Inspector with Nicholas S. Hill, Freeport, N. Y., on sewerage system. *TT 0.2: SP 0.2.*—May 1928 to Jan. 1929 Asst. Engr. with H. Burdette Cleveland, New York City, surveying, mapping and assisting on design of Red Bank sewage-treatment plant and relief trunk sewer and in general charge of incinerator construction at Rumson, N. J. *TT 0.6: P 0.6: RC 0.4: D 0.2.*—Jan. 1929 to July 1930 Designer with Remington, Vosbury & Goff, Camden, N. J., designing and drafting sewerage systems and sewage-treatment plants. *TT 1.6: P 1.6: D 1.6.*—July 1930 to date Designer with Fuller & McClintock, Philadelphia, designing and drafting on filtration plant (21 000 000 gal. daily) for York, Pa., reporting on water supplies for Middletown, N. Y., and Phoenixville, Pa., designed systems of reinforcing mains for water distribution, and worked on investigation of probable yield of water-sheds and storage reservoirs in Middletown, etc. *TT 0.7: P 0.7: D 0.7.*—*TT 13.4: SP 1.4: P 12: RC 5.5: D 7.* Refers to H. B. Cleveland, W. S. Coulter, C. A. Emerson, Jr., W. A. Goff, O'K. W. Myers, J. C. Remington, Jr., C. F. Wertz.

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(1) **VAN HOUTEN, ROBERT WALLACE**, 20 Brookside Terrace, Millburn, N. J. (Age 26. Born Newark, N. J.) 1930 B. S. in Civ. Eng., Newark Coll. of Eng. *TT 4: P 4.*—Summers



1927 and 1928 Inspector of Highways, Town of Irvington, N. J., street paving, etc.—Summer 1929 with A. C. Windsor Constr. Co., Belleville, N. J., 1 month as Instrumentman and 1½ months Inspector of pile driving.—Sept. 1930 to date Instructor of Mathematics, Field Surveying and Laboratory course in Graphics and Structural Design, Newark Coll. of Eng. *TT 0.3: SP 0.3.—TT 4.3: SP 0.3: P 4.* Refers to H. N. Cummings, W. S. LaLonde, Jr.

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(9) VITZ, ALVIN, 230 Parkway Ave., Hartwell, Cincinnati, Ohio. (Age 27. Born Louisville, Ky.) 1928 M. S., and C. E., Univ. of Cinn. *TT 4: P 4.*—June 1921 to Jan. 1923 Asst. Foreman, Grid Dept., Post Glover Elec. Co., on manufacture of steel resistance grids for mine motors, Cincinnati, Ohio. *TT 0.8: SP 0.8.*—June 1923 to July 1926 and Jan. 1927 to June 1928 (co-operative work) until Jan. 1924 as Tracer with B. T. Wisenall, Archt. and Contr., Cincinnati, office work and field surveys; Jan. to Nov. 1924 Tracer and surveying, Underground Dept., Union Gas & Elec. Co., Cincinnati, laying out cable survey; Nov. 1924 to Jan. 1926 Computer and Field Surveyor, Rapid Transit Comm., Cincinnati, survey computations, drawing, field work; Jan. to July 1926 Draftsman and Field Surveyor, Div. Engr's office, Pennsylvania R. R., Richmond, Ind., lining track, surveying leases, etc.; Jan. 1927 to June 1928 Draftsman and Designer, Columbia Eng. & Management Corporation, Cincinnati, on concrete and steel design and layout.—July to Dec. 1926 Wiper in Engine Room, S. S. *Schenectady*, Moore & McCormick Line.—Sept. 1929 to date surveying, design, personnel work (safety), Procter & Gamble Co., Ivorydale, in Eng. Dept., and (since Sept. 1930) Ind. Relations Div. *TT 1.6: P 1.6: RC 0.8.—TT 6.4: SP 0.8: P 5.6: RC 0.8.* Refers to H. B. Luther, R. W. Renn.

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(10) WAGENER, FREDERICK WILLIAM, 801 National Loan & Exchange Bldg., Columbia, S. C. (Age 26. Born Summerville, S. C.) 1926 B. S. in C. E., Ga. School Tech. *TT 4: P 4.*—Sept. 1926 to Sept. 1930 Instructor, Asst. Prof. and (1 year) Prof. of Eng. Drawing and Mathematics, Georgia State Coll. for Men, Tifton, Ga. *TT 4: P 4.*—Sept. 1930 to date Jun. Hydr. Engr., U. S. Geological Survey. *TT 0.5: P 0.5.—TT 3.5: P 3.5.* Refers to R. P. Black, W. E. Hall, A. E. Johnson, W. R. King, F. C. Snow.

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(1) WARN, CARL ADOLPHUS, 38 Colonial Terrace, Springfield, N. J. (Age 27. Born Ogden, Kans.) 1924 to 1925 Pile Inspector and with field party, Kenn-Well Contr. Co., New York City. *TT 0.5: SP 0.5.*—1925 to 1927 Transitman and Rodman, San. Sewer Comm., White Plains, N. Y., made surveys, ran line and levels for trunk sewer, etc. *TT 1: SP 1.*—1927 Chf. of Party, Sleepy Hollow Manor Development, Tarrytown, N. Y., ran lines and grades, sections, stakeout work, made surveys for sanitary sewer, set street corner monuments, etc. *TT 0.2: P 0.2.*—1928 to 1930 Acting Chf. of Party, under Town Engr., Westfield, N. J., made surveys for and staked out streets, sewers and sidewalks, assisted on new tax map, etc. *TT 2: P 2.*—1930 to date Asst. to Engr. for E. J. Flaherty Contr. Co., Jersey City, N. J., kept field records and costs and assisted in seeing that work conformed to plans and specifications. *TT 1: P 1.—TT 4.7: SP 1.5: P 3.2.* Refers to W. Caccla, F. E. Cudworth, G. W. Gardner, J. T. Hopkins, F. C. Zeigler.

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(15) WEHRUNG, JOHN POWELL, 908 North Somerville St., Pampa, Tex. (Age 37. Born Hutto, Tex.) Licensed Land Surveyor, State of Texas.—June 1913 to June 1914 Chainman, and June 1914 to April 1915 Rodman, Eng. Dept., Waco, Tex., on sewers and paving. *TT 0.9: SP 0.9.*—May 1916 to April 1917 Instrumentman on paving and sewers, until Jan. 1917 with Eng. Dept., Amarillo, then with H. E. Elrod, Childress, Tex. *TT 0.5: SP 0.5.*—June to Dec. 1917 Timekeeper, construction, Camp McArthur, Waco. *TT 0.2: SP 0.2.*—July 1918 to Aug. 1919 Private, 31st Div., U. S. Army, in France.—Oct. 1919 to Dec. 1920 Asst. County Engr., McLennan County, Tex., on highway maintenance and construction. *TT 1.1: P 1.1: RC 1.1.*—Dec. 1920 to Sept. 1921 with Runnels County, Tex., on highways, until June 1921 as Asst. County Engr. on construction, then County Engr. on location and design. *TT 0.7: P 0.7: RC 0.7: D 0.2.*—Oct. 1921 to Aug. 1925 County Engr., Falls County, Tex., on location, design, construction and maintenance of highways for Commr.'s Court and Texas State Highway Dept. *TT 3.9: P 3.9: RC 3.9: D 1.5.*—Jan. 1926 to Feb. 1927 Computer, Huasteca Petroleum Co., Tampico, Mexico, on engineering and surveying calculations. *TT 1.1: P 1.1: RC 1.1.*—April 1927 to date Asst. to A. H. Doucette, Pampa, Tex., on design and construction of sanitary sewers, street paving and county roads, oil field surveying and engineering. *TT 4: P 4: RC 4: D 2.—TT 12.4: SP 1.6: P 10.8: RC 10.8: D 3.7.* Refers to G. Gilchrist, M. Hannah, J. S. Kunkel, T. J. Palm, R. J. Potts, U. Stephens.

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(2) WESTCOTT, FRANK TOURTELLOT, 95 High St., North Attleboro, Mass. (Age 29. Born North Attleboro, Mass.) 1922 B. S., Mass. Inst. Tech. *TT 4: P 4.*—1922 to 1924



Estimator, Standish Eng. Co., Chicago, Ill., estimating and designing in office and Asst. Supt. in field. *TT 2: P 2.*—1924 (6 months) and 1926 to 1929 member of firm, Westcott & Munroe, Gen. Contrs.; supervised and was responsible for Pawtuxet Dam (1924) and Longview Reservoir (1927) for Providence Water Board, Mirimichi Dam (1926) for City of Attleboro, Mass., Mt. Hope Bridge sub-contract for the Foundation Co., lighthouse for U. S. Govt., Mansfield and Acton Bridges for State of Massachusetts (1928) Filter Plant for Larchmont, N. Y., and Larchmont Bridge for Westchester County Park Comm. (1929). *TT 3.9: P 3.9: RC 3.9.*—1924 to 1926 Supt. and Estimator, Central Eng. & Constr. Co., Pawtucket, R. I. *TT 1.5: P 1.5.*—1929 to date Treas., Munroe & Westcott, Inc., Gen. Contrs., supervised East Greenwich Bridge for Rhode Island Highway Dept., and Hanover Bridge for Massachusetts Highway Dept. *TT 1.3: P 1.3: RC 1.3.*—*TT 12.7: P 12.7: RC 5.2.* Refers to C. M. Everett, G. W. Fuller, D. W. Howes, A. A. Jones, F. B. Marsh, W. W. Peabody, F. E. Winsor.

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(14) WINFREY, RICHARD BEAN, 208½ Jefferson Ave., Jonesboro, Ark. (Age 32. Born Rudy, Ark.) 1927 B. C. E., Univ. of Ark. *TT 4: P 4.*—June 1920 to Sept. 1921 Asst. County Engr., Adair and Sequoyah Counties, Okla., on road and bridge construction and maintenance. *TT 1.3: P 1.3: RC 0.3.*—June 1922 to April 1926 with Kansas City Southern Ry. Co., as Chairman and Rodman, and (3 years) Transitman in charge of field party, principally on maintenance with some construction. *TT 3.4: SP 0.4: P 3: RC 3.*—April 1926 to Aug. 1927 Laboratory Testing Engr. and in charge of testing laboratory for Arkansas Highway Dept., in conjunction with research work for Univ. of Arkansas, testing road materials. *TT 1.3: P 1.3: RC 1.3.*—Aug. 1927 to date with Arkansas Highway Dept., over 1 month as Field Engr. on materials survey, 2 months Chf. of party on location, 13/10 years Dist. Office Engr., Dist. No. 10 (7 counties, approx. 900 miles), checking estimates and plans, preparing special data, etc., and remainder of time Dist. Maintenance Engr., preparing budgets, reports, estimates and design for special conditions and field supervision of all maintenance; also supervised some construction by State forces. *TT 3.6: P 3.6: RC 3.6: D 1.9.*—*TT 13.6: SP 0.4: P 13.2: RC 8.2: D 1.9.* Refers to S. A. Brady, G. W. Cobb, F. A. Gerig, W. R. Spencer, W. F. Turner.

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(7) WOOD, BENSON JARVIS, 1816 Gratiot Ave., Saginaw, Mich. (Age 22. Born Port Huron, Mich.) 1930 B. S. E., Univ. of Mich. *TT 4: P 4.*—July 1930 to date Student, Plant Dept., Michigan Bell Telephone Co. *TT 0.4: SP 0.4.*—*TT 4.4: SP 0.4: P 4.* Refers to J. H. Cissel, L. M. Gram, C. O. Wisler, J. S. Worley.

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(15) YOUNG, KENNETH ROSCOE, Box 47, Monroe, La. (Age 38. Born Fairfield, Iowa.) 1914 B. S., Okla. A. & M. Coll. *TT 4: P 4.*—June to Aug. 1914 Transitman with W. S. Barwick, and Aug. to Oct. 1914 Chf. of Party with Sinclair & White, on surveys, etc. *TT 0.2: SP 0.2.*—Oct. 1914 to May 1915 Chf. of Party with Edgar S. Graham, Cons. Engr., on preliminary, location and construction of Santa Fe & Oil Fields Ry. *TT 0.3: SP 0.3.*—May 1915 to date with War Dept., Engr. Dept. at Large, Vicksburg, Miss., until Jan. 1916 as Surveyman and Instrumentman on levee construction, Yancopin, Ark.; Jan. 1916 to May 1923 Foreman in charge of Levee Machines Nos. C-1 and C-14, at Round Lake and Scott, Miss., being responsible for organization, operation and maintenance of levee-building units, engineering and inspection for construction and inspection and maintenance during flood and high-water periods; May 1923 to Aug. 1928 at Lake Providence, La., as Gen. Foreman, being in charge, as Res. Engr., of location and construction, also maintenance of entire line of levee (231 miles), Upper Tensas Levee Dist. in Arkansas and Louisiana, being responsible for mobilization, operation and maintenance of four to six levee-machine units, and for construction of levee, also for supply depot for machines, etc. (expenditure approx. \$1 000 000 annually), initiated studies of levees, made surveys and originated flood-control plans and submitted reports to Dist. Engr. on locations for improvements of alignment, economical construction, probable slope of line of saturation during flood periods, etc., submitted annual estimates on projects in Tensas districts; Aug. 1928 to Jan. 1929 First Asst. to Area Engr., Southern Area (approx. 90 miles of Mississippi River), Lake Providence, in charge of levee construction, made plans and studies for location and construction of levees; Jan.-Feb. 1929 Associate Engr. in charge of Supply Sec., studying requirements, procuring equipment and material, giving technical advice, etc. March 1929 to March 1930 Engr. in Chg., and since March 1930 Senior Engr. in Chg., Western Area (about ½ of Dist.), on operation and care of canals, etc., locks and dams on Ouachita River, Arkansas and Louisiana, and maintenance and improvement of Ouachita, Black and Red Rivers, being responsible for administration

of Area Office, Monroe, La., surveys, levee construction and maintenance, revetment, etc.; prepares (with recommendations to Dist. Engr.) studies, plans and designs of proposed flood-control projects, etc. TT 15.5: SP 0.3: P 15.2: RC 15.2: D 2.5.—TT 20: SP 0.8: P 19.2: RC 15.2: D 2.5. Refers to O. G. Baxter, F. G. Christian, G. R. Clemens, P. E. Cunningham, F. J. Fitzpatrick, J. C. H. Lee, P. S. Reinecke.

## FOR TRANSFER

### FROM THE GRADE OF ASSOCIATE MEMBER

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(1) CUMMINGS, HAROLD NEFF, Assoc. M., 30 Lloyd Pl., Belleville, N. J. (Elected June 10, 1929.) (Age 46. Born Oxford, Me.) 1906 A. B., Bates Coll. 1910 S. B., Mass. Inst. Tech. TT 4: P 4.—June 1910 to April 1911 Transitman, Computer, etc., with Buck & Sheldon, Civ. and Cons. Engrs., Hartford, Conn. TT 0.4: SP 0.4.—April 1911 to Oct. 1913 with Great Northern Paper Co., Millinocket, Me., 1 year as Draftsman and Transitman, then Prin. Asst. Engr., Eng. Dept., designing, checking, etc., being Field Party Chf., Inspector and Asst. in charge of hydraulic and water supply computations, etc. TT 2.3: P 2.3: RC 1.8: D 0.5.—Oct. 1913 to Oct. 1914 Head, Civ. Eng. Dept., Mechanics Inst., Rochester, N. Y. TT 0.9: P 0.9: D 0.9.—Oct. 1914 to June 1917 Head, Dept. of Mathematics, Lynn (Mass.) English High School.—July 1917 to June 1918 Instructor of Applied Mathematics and Mil Eng., Wentworth Inst., Boston, Mass. TT 1: P 1: D 1.—July to Aug. 1918 Computer on hydraulic studies with H. K. Barrows, Boston. TT 0.2: P 0.2.—Sept. 1918 to May 1920 Associate Prof. of Civ. Eng., Univ. of Delaware, and 1 year (in absence of Dean) Acting Head of Dept. TT 1.8: P 1.8: RC 1.8: D 1.8.—June 1920 to date at Newark (N. J.) Coll. of Eng., until June 1927 as Prof. of Applied Mathematics, and since then Prof. of Civ. Eng. in charge of developing and conducting Dept. of Civ. Eng. TT 10.7: P 10.7: RC 10.7: D 10.7.—TT 21.3: SP 0.4: P 20.9: RC 13.8: D 14.9. Refers to F. C. Bowler, J. E. Garratt, H. P. Hammond, H. W. Hellmann, G. L. Hosmer, C. M. Spofford.

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(15) DALE FREDERICK AMERMAN, Assoc. M., 818 Scarborough Bldg., Austin, Tex. (Elected Jan. 16, 1922.) (Age 39. Born New York City.) A. B., N. Y. Univ. 1914 S. B., Mass. Inst. Tech. TT 4: P 4.—June to Aug. 1914 and Nov. 1915 to July 1916 with Algoma Steel Corporation, Sault Ste. Marie, Ont., successively as Engr. on surveys and estimates for iron mine and Field Engr. on layout of new construction in steel plant. TT 0.9: P 0.9: RC 0.9.—May to Nov. 1915 Jun. Asst. Engr., Public Service Comm., New York City, on subway construction, field work. TT 0.3: SP 0.3.—Aug. 1916 to April 1917 Field Engr. and Draftsman, Lake Superior Paper Co., on layout of paper-mill construction and drafting. TT 0.6: SP 0.1: P 0.5: RC 0.5.—April 1917 to March 1918 Asst. to Res. Engr. and Res. Engr., with James O. Heyworth, Chicago, Ill., on construction of 20 000-h. p. hydro-electric plant at Sault Ste. Marie, Ont. TT 0.9: P 0.9: RC 0.3.—April 1918 to March 1919 with Fay, Spofford & Thorndike, Boston, Mass., in Statistical Dept. on construction of Army Supply Base and later Designer of reinforced concrete for same work. TT 1: P 1: RC 0.5: D 0.5.—May to Aug. 1919 Designer and Estimator, Concrete Steel Co. of New York, on reinforced concrete buildings. TT 0.3: P 0.3: RC 0.1: D 0.3.—Aug. 1919 to July 1923 Asst. Engr. with George F. Hardy, New York City, designing and estimating hydro-electric plants and paper-mill construction. TT 4: P 4: RC 3: D 4.—July 1923 to July 1925 Prin. Asst. Engr. with L. F. Harza, Chicago, on design of Dix River hydro-electric project. TT 2: P 2: RC 2: D 2.—July 1925 to July 1929 Hydro-Elec. Engr., Interstate Public Service Co., in charge of operation and maintenance of ten hydro-electric plants in Indiana, and miscellaneous construction. TT 3.5: SP 0.5: P 3: RC 3: D 1.—July 1929 to April 1930 Hydro-Elec. Engr., National Elec. Power Co., New York City, on construction of hydro-electric projects and reports. TT 0.7: P 0.7: RC 0.7: D 0.3.—April 1930 to date Mgr., Emery, Peck & Rockwood Development Co., being Owner's Representative on construction of hydro-electric projects on Colorado River. TT 0.9: P 0.9: RC 0.9.—TT 19.1: SP 0.9: P 18.2: RC 11.9: D 8.1. Refers to C. M. Allen, J. S. Bowman, E. M. Burd, G. W. Hamilton, L. F. Harza, H. P. McKean, B. E. White.

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(9) GILLHAM, PHILIP DAKIN, Assoc. M., 320 Steele St., Frankfort, Ky. (Elected Junior Oct. 30, 1906; Assoc. M. April 4, 1911.) (Age 47. Born Princeton, Ill.) 1904 B. S. in Civ. Eng., Univ. of Ill. TT 4: P 4.—June 1904 to Jan. 1905 in charge of land and drain-

age surveys, Princeton, Ill. *TT 0.6: P 0.6.*—Jan. to June 1905 with Chicago (Ill.) Bridge & Iron Works, detailing steel bridges. *TT 0.2: SP 0.2.*—June to Sept. 1905 with Noelke Richards Iron Works, Indianapolis, Ind., detailing structural steel for Grand Leader Bldg., St. Louis. *TT 0.1: SP 0.1.*—Sept. 1905 to Oct. 1913 with Corrugated Bar Co., St. Louis, 4 years as Asst. Engr., St. Louis office, designing, preparing detail plans, writing specifications for and estimating cost of construction of reinforced concrete and structural steel arch and girder bridges, culverts, viaducts, factory, warehouse, office and other buildings, footings, foundations, retaining walls, abutments, reservoirs, sewers, conduits, tanks, grain bins, coal pockets, etc.; 1 year Engr. on construction of various reinforced concrete structures, including Butler Bros. Bldg., St. Louis (8 stories, \$1 000 000) and foundations for additions to government penitentiary, City of Mexico, and had charge of contracts for bending and placing reinforcing steel and for construction of fireproof partitions and metal furring; 2 years Mgr., Buffalo Dist. Office, in charge of engineering, and 1 year Mgr., St. Louis Dist. Office. *TT 7.8: SP 0.3: P 7.5: RC 6: D 6.*—Oct. 1913 to Oct. 1924 various short periods on problems involving surveys, construction, etc.—Oct. 1924 to date Designer, Kentucky State Highway Dept., in responsible charge of design of bridges and structures, including steel highway bridges, also writing specifications and estimating cost of construction, part of time on field work involving drainage problems, location, general layout, construction and maintenance of roads and structures and reconstruction of old bridges. *TT 6.4: P 6.4: RC 6.4: D 5.4.*—*TT 19.1: SP 0.6: P 18.5: RC 12.4: D 11.4.* Refers to C. R. Bloxton, H. R. Creal, J. M. Johnson, A. E. Lindau, C. W. Lovell, J. T. Madison, W. I. Nolen, D. V. Terrell, W. S. Thomison.

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(7) **HOLLAND, RAY KINGSBURY**, Assoc. M., 106 East Liberty St., Ann Arbor, Mich. (Elected June 24, 1914.) (Age 48. Born Edwardsburgh, Mich.) 1908 B. S. in E. E., Univ. of Mich. *TT 4: P 4.*—1908 to 1917 with Gardner S. Williams, Cons. Engr., Ann Arbor, Mich., until 1909 as Draftsman on field work, computation and mapping of surveys, then Asst. Engr., acting as Chf. of Party of surveys and on design, also Res. Engr., and on office work, on hydro-electric development (\$165 000) at Sturgis, Mich., etc. and after 1911 Prin. Asst. Engr., in responsible charge of designs, reports, appraisals and specifications on two hydro-electric plants in Ann Arbor (\$390 000), hydro plant at Big Rapids, Mich. (\$65 000), storage dam, Cloquet River, Mich. (\$275 000), water-works intake, Grosse Point Farms, Mich. (\$65 000), appraisals and accounting system for Elec. Dept., Chicago (Ill.) San. Dist. (about \$10 000 000). *TT 7.9: SP 0.9: P 7: RC 7: D 6.6.*—1917 to date member of firm, Holland, Ackerman & Holland, Cons. Engrs., Ann Arbor and Chicago, Ill., in charge of reports, designs, specifications, appraisals, rate cases, etc., including construction and reconstruction of hydro-electric developments in various cities in Michigan, Illinois, Iowa, Wisconsin and Indiana (\$20 000 to \$1 750 000, total over \$8 500 000), also on construction of pumping-station and wells, Ann Arbor, Mich. (\$350 000); woolen mill, Hanover, Ill. (\$300 000); water-works system, Belleville, Mich. (\$25 000), and design (not construction) and estimate of cost of hydro-electric developments, including St. Croix River, Wis. (\$1 900 000), Ontonagon River, Mich. (\$6 750 000), Black River, Mo. (\$3 500 000), Spokane River (\$2 750 000), Westfield River, Mass. (\$3 350 000), Sturgeon River, Mich. (\$325 000) and two on Spring River, Mo. (\$420 000) (detailed statement of work forwarded with application). *TT 13.7: P 13.7: RC 13.7: D 13.7.*—*TT 25.6: SP 0.9: P 24.7: RC 20.7: D 20.3.* Refers to L. E. Ayres, M. E. Cooley, W. C. Hoad, H. W. King, M. Osgood, H. E. Riggs, G. S. Williams.

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(1) **SCHWARZE, CARL THEODORE**, Assoc. M., 95 Circle Drive, Hastings-on-Hudson, N. Y. (Elected May 1, 1907.) (Age 53. Born Freedom, Wis.) 1903 B. S. in C. E., Cooper Union. 1905 C. E., Lehigh Univ. *TT 4: P 4.*—Sept. 1899 to April 1901 Draftsman, Rodman, etc., Delaware, Lackawanna & Western R. R. *TT 0.8: SP 0.8.*—May 1901 to Sept. 1903 Draftsman, design of masonry structures, and Fieldman on special survey, Jersey Shore Div., New York Central & Hudson River R. R. *TT 1.6: SP 0.6: P 1.*—Sept. 1903 to June 1905 student.—June 1905 to Sept. 1907 Asst. Engr., Brooklyn Grade Crossing Comm., in charge of construction of Brighton Beach Line, B. M. T., Ave. U. to Brighton Beach. *TT 2.2: P 2.2.*—Sept. 1907 to Aug. 1912 Instructor in, and Sept. 1912 to Aug. 1921 Asst. Prof. of, Civ. Eng., Cooper Union. *TT 14: P 14: RC 9.*—Sept. 1920 to Aug. 1921 Lecturer in, and Sept. 1921 to date Associate Prof. of, Civ. Eng., New York University. *TT 11.3: P 11.6: RC 11.6.*—*TT 33.2: SP 1.4: P 31.8: RC 19.6.* Refers to C. T. Blissell, L. Bush, S. E. Coombs, F. E. Foss, C. W. Hudson, C. H. Snow.



## FROM THE GRADE OF JUNIOR

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(6) ACKERMAN, ADOLPH JOHN, Jun., 2400 Oliver Bldg., Pittsburgh, Pa. (Elected Dec. 3, 1926.) (Age 29. Born New Ulm, Minn.) 1926 B. S. in E. E., Univ. of Wis. TT 4: P 4.—June-Dec. 1923 Rodman, Inspector, Instrumentman and Draftsman, Consumers Power Co. and Fargo Eng. Co., on Alcona dam, Au Sable River, Mich. TT 0.3: SP 0.3.—Jan. to May 1924 with Fargo Eng. Co., drafting, designing, estimating and checking plans for Hodenpyl development. TT 0.3: SP 0.1: P 0.2.—May 1924 to Sept. 1925 with Commonwealth Power Corporation (Allied Engrs., Inc.), as Prin. Asst. Res. Engr. on Hodenpyl development (25 000 h. p., 65-ft. head, earth dam), Manistee River, Mich., construction, plant design and erection, railway layout and location, design of special structures, in charge of instrument parties and inspectors, final approval of construction, general inspection and supervision; during winter in office on hydro-plant design and investigations. TT 1.4: P 1.4: RC 1.3.—Oct. 1925 to June 1926 Special Student in Hydr. Eng., Univ. of Wisconsin.—July 1926 to Nov. 1927 Hydr. Designer with Stone & Webster, Inc., Boston, on reinforced concrete and hydraulic structures, estimating, computing and checking designs on Conowingo development (378 000 h. p.), later in charge of Design Squad on addition (20 000 h. p.) to Bartlett's Ferry development. TT 1.3: P 1.3: RC 1.3: D 0.3.—Nov. 1927 to date in Hydr. Dept., Aluminum Co. of America, Pittsburgh, Pa., on general and detail design of hydro-electric projects, including Chute a Caron (260 000 h. p.), Calderwood (168 000 h. p.), Nantahala (56 000 h. p.), also preliminary designs of Chilhowee (36 000 h. p.) and Tuckertown (54 000 h. p.), checking final designs, writing specifications, shop inspection, preparing estimates and construction schedules, reports, etc. TT 3.4: P 3.4: RC 3.4: D 3.4.—TT 10.7: SP 0.4: P 10.3: RC 6: D 3.7. Refers to E. M. Burd, R. F. Ewald, P. E. Glaiger, H. S. Hunt, D. W. Mead, R. A. Monroe, J. W. Rickéy, G. R. Strandberg.

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(4) CASTLEMAN, FRANCIS LEE, Jr., Jun., 128 Rochelle Ave., Philadelphia, Pa. (Elected Oct. 1, 1926.) (Age 28. Born Trenton, N. J.) 1925 A. B., and 1926 C. E., Lehigh Univ. TT 4: P 4.—Summers 1920, 1922-1925 and June 1926 to date (except April to July 1923 and Sept. 1923 to July 1929) with American Bridge Co., as follows: Summers, Draftsman, Pencoyd Plant, on structural steel; June 1926 to March 1928 and Aug. to Sept. 1923 Draftsman-Engr., on structural steel, general drawings, design of particular type of details and investigation of standard data, figuring deflections of trusses, redesigning, theoretical investigation of wind in high buildings, etc.; since Feb. 1929 with Erecting Dept., on design of falsework for bridges and buildings and of derricks and travelers, theoretical investigation of design data for derrick blocks and tackles and calculation of cable erection for suspension bridges (Mid-Hudson Bridge and Waldo-Hancock Bridge, Maine, under construction), also (part of time) in field; April to July 1928 loaned to P. M. Sax, Cons. Engr., Philadelphia, Pa., on design of steel and concrete for and solution of wind stresses in structural steel frames of tier office buildings and on design of concrete auditorium building; Sept. 1928 to Feb. 1929 loaned to United Engrs. and Constructors, on design of steel and concrete for Pennsylvania R. R. improvements in Philadelphia. TT 4.5: SP 0.2: P 4.3: RC 1.9: D 1.8.—TT 8.5: SP 0.2: P 8.3: RC 1.9: D 1.8. Refers to F. O. Dufour, R. J. Fogg, J. B. Gemberling, W. G. Grove, P. M. Sax, V. G. Thomassen.

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(3) DUNN, GEORGE PERRY, Jun. 158 State St., Albany, N. Y. (Elected Jan. 14, 1929.) (Age 28. Born Trenton, N. J.) 1924 B. S. in C. E., Drexel Inst. TT 4: P 4.—June 1924 to Feb. 1925 Inspector, Pennsylvania Dept. of Highways, on concrete bridges and culverts and highway paving, drafting and computing. TT 0.3: SP 0.3.—Feb. to Oct. 1925 Asst. Civ. Engr., New Jersey State Highway Dept., surveys and drafting on connecting road studies for Delaware River Bridge approaches. TT 0.4: SP 0.4.—Oct. 1925 to May 1926 Draftsman, Tampa Beach, Inc., computing and drafting for real-estate development, design on water system, bridge, dock, etc. TT 0.4: SP 0.2: P 0.2: D 0.2.—May to Aug. 1926 Asst. Engr., McCormack Eng. Co., field and office work on preliminary estimates for hydraulic fill, drainage and road projects. TT 0.2: SP 0.1: P 0.1: D 0.1.—Aug. 1926 to March 1928 Office Engr., Hillsborough County Eng. Dept., responsible for surveys and inspection, including reports, estimates, commissary, etc. and secured part of right of way on 189 miles Ilmerock road construction. TT 1.3: SP 0.1: P 1.2: RC 1.2.—March 1928 to July 1929 Senior Civ. Engr., New Jersey State Highway Dept., surveying and drafting on plans for concrete highway construction, being Engr. on concrete highway project. TT 1: SP 0.3: P 0.7: RC 0.7.—July 1929 to date Asst. Engr., New York Telephone Co., planning and review of toll routes, design of conduit structures, special fixtures, vaults, etc., field



specifications and tool instruction writing. TT 1.2: SP 0.4: P 0.8: D 0.8.—TT 8.8: SP 1.8: P 7: RC 1.9: D 1.1. Refers to W. E. Bailey, F. C. Claus, W. Easby, Jr., H. W. Giffin, M. den H. Kolyn, P. F. Rossell.

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(14) HAWORTH, HARRY SLOAN, Jun., P. O. Box 309, Wood River, Ill. (Elected Jan. 14, 1924.) (Age 32. Born Springfield, Ill.) 1923 B. S. in C. E., Univ. of Ill. TT 4: P 4.—Feb. to Aug. 1922 Instrumentman-Inspector, Dept. of Hard-Surface Roads, Orange County, Orlando, Fla., on location and grading surveying, some culvert and bridge design. TT 0.3: SP 0.3.—June 1923 to Nov. 1925 Designer, Detailer and Salesman, reinforced concrete structures, Concrete Eng. Co., Chicago, Ill. TT 2.4: P 2.4: D 1.4.—Nov. 1925 to Nov. 1926 Salesman, Concrete Waterproofing Co., Chicago, sales of waterproofing for concrete sub-structures. TT 1: P 1.—Nov. 1926 to July 1929 Structural Engr. and Estimator, Schmidt Bros. Constr. Co., Chicago, designing, estimating and supervising construction of industrial and garage buildings. TT 2.7: P 2.7: D 1.7.—July 1929 to March 1930 Structural Engr., Chicago, on design of reinforced concrete and structural steel buildings. TT 0.7: P 0.7: RC 0.7: D 0.7.—March to May 1930 Bridge Designer, Div. of Highways, State Bureau of Bridges, Springfield, Ill., on design of reinforced concrete and structural steel bridges. TT 0.2: P 0.2: D 0.2.—May 1930 to date Designing Engr., Standard Oil Co. (Ind.), Wood River, Ill., on reinforced concrete and steel mill building design, pipe stills, fractioning equipment and tank design. TT 0.9: P 0.9: RC 0.9: D 0.9.—TT 12.2: SP 0.3: P 11.9: RC 1.6: D 4.9. Refers to C. A. Browne, G. F. Burch, H. Cross, J. F. Seifried, C. C. Williams, W. M. Wilson.

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(6) HILL, LOUIS HAWES, Jun., Holley Ave., South Hills, Charleston, W. Va. (Elected Aug. 29, 1927.) (Age 31. Born Bluefield, W. Va.) 1925 B. S. C. E., W. Va. Univ. TT 4: P 4.—March to Sept. 1919 Rodman, U. S. Naval Ordnance Plant, South Charleston, W. Va., 3 months running level. TT 0.2: SP 0.2.—Summer 1923 (one-half of time) Draftsman, City of Morgantown, W. Va., detailing and tracing for sewers, paving, etc.—Sept. 1923 to April 1924 Draftsman, until Dec. 1923 with West Virginia State Road Comm., Charleston, W. Va., road detailing and tracing and some bridge tracing, then with C. & P. Telephone Co. of West Virginia, Charleston, mapping for inventory. TT 0.3: SP 0.3.—April 1924 to date with City of Charleston, until Jan. 1925 as Draftsman, designing, tracing and estimating for paving, sewers, culverts, etc. Jan. 1925 to Jan. 1926 Chf. Draftsman, Jan. 1926 to July 1927 Office Engr., and since July 1927 Asst. City Engr. in charge of office, on plans, etc., for retaining walls, sewers, paving, undergrade railway crossings, etc., also (since July 1927) revising specifications. TT 6.9: P 6.9: RC 6.2: D 3.3.—TT 11.4: SP 0.5: P 10.9: RC 6.2: D 3.3. Refers to T. F. Boltz, H. L. Campbell, C. P. Fortney, G. H. Hill, L. L. Jemison, C. E. McCoy, C. M. Ross, W. D. Sell.

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(7) MILLER, ARTHUR PHILLIPS, Jun., 13941 Cloverlawn Ave., Detroit, Mich. (Elected April 18, 1927.) (Age 29. Born Merchantville, N. J.) 1924 B. S., Worcester Pol. Inst. TT 4: P 4.—Sept. 1924 to Feb. 1925 Civ. Eng. Draftsman and Field Asst. for E. Worthington, Cons. Engr., Dedham, Mass., computing and platting of surveys, etc. TT 0.2: SP 0.2.—March 1925 to date Senior Civ. Eng. Draftsman, Div. of Eng., Dept. of Water Supply, City of Detroit, on Additional Water Supply Project (approx. cost \$30 000 000), until Dec. 1929 with Bureau of Land Tunnels, jurisdiction of Bureau extended to design and construction of land tunnels on above project, together with junction works including three large and deep concrete lined shafts for gate wells; duties in Dept. consisted of analyses of tunnel sections for materials, thicknesses, diameters and conditions of loading, mathematical and hydraulic computations, research work and laboratory testing of tunnel sections and engineering construction materials, drafting and designing in connection with tunneling, shafts, etc., also checking estimates and assisting in writing of contracts and specifications; since Jan. 1930 with Bureau of Power, designing and writing contracts and specifications for heavy and difficult hydraulic works and power structures, supervising draftsmen and designers on contract drawings for hydraulic works and power structures. TT 5.2: SP 0.9: P 4.3: RC 1.5: D 4.3.—TT 9.4: SP 1.1: P 8.3: RC 1.5: D 4.3. Refers to T. Elde, G. H. Fenkell, L. G. Lenhardt, F. E. Simpson, F. H. Stephenson.

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(1) PEARCE, JOHN EDWIN, Jun., 126 De Hart Pl., Elizabeth, N. J. (Elected Dec. 26, 1929.) (Age 28. Born Alachua, Fla.) 1926 B. S. C. E., Univ. of Fla. TT 4: P 4.—June 1922 to Sept. 1923 and June 1926 to May 1929 with Florida State Road Dept., until Dec. 1926 as Instrumentman on location and construction, and (June to Dec. 1926) in direct charge of location surveys in 5th and 7th Divs., and after Dec. 1926 Project Engr. in

direct charge of highway and bridge location surveys in 4th, 5th and 7th Divs. *TT 3: P 3: RC 2.4.*—May to Aug. 1929 Field Engr., Chiriqui Land Co. (subsidiary of United Fruit Co.) at Puerto Armuelles and Progreso, Panama, on railroad and canal construction, farm surveying and drafting. *TT 0.3: P 0.3: RC 0.3.*—Sept. 1929 to date Designing Engr. and Draftsman, Standard Oil Co. of New Jersey, Bayway Refinery, Elizabeth, N. J., on design of refinery equipment and improvements. *TT 1.6: P 1.6: RC 1.6: D 1.6.*—*TT 8.9: P 8.9: RC 4.3: D 1.6.* Refers to G. E. Barnes, D. J. Haggerty, M. C. Hall, A. W. Kinney, H. D. Mendenhall, P. L. Reed, J. Verner.

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(11) **PETERSON, HILMER FREDERIC**, Jun., 1117 Avon Place, South Pasadena, Cal. (Elected Nov. 14, 1927.) (Age 29. Born Brainerd, Minn.) 1927 B. S. in Civ. Eng., Cal. Inst. Tech. *TT 4: P 4.*—Aug. 1923 to Oct. 1924, Aug. 1925 to Oct. 1926 and July to Sept. 1927 Draftsman, and Sept. 1927 to Feb. 1928 Jun. Civ. Engr., Office of Los Angeles County Surveyor, drafting and computing on maps, title search work, etc., and (after Dec. 1927) Squad Leader. *TT 1.5: SP 1.3: P 0.2: RC 0.2.*—Feb. 1928 to date with Survey and Drafting Dept., Shell Oil Co., Los Angeles, Cal., until Sept. 1928 Draftsman and Computer, on maps, geodetic and plane calculations for triangulation, etc. Oct. 1928 to June 1929 Squad Leader, on computing, drafting, and calculating; June 1929 to Aug. 1930 Asst. to Chf. Draftsman, and since Aug. 1930 Acting Chf. Draftsman supervising drafting, computing, etc., and allocating all work in Drafting Room. *TT 2.9: SP 0.3: P 2.6: RC 2.6.*—*TT 8.4: SP 1.6: P 6.8: RC 2.8.* Refers to M. C. Alcorn, N. F. Cobb, R. R. Martel, W. W. Michael, F. Thomas, A. A. Webb.

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(15) **SANTACRUZ, ARMANDO, Jr.**, Jun., 1915 East Rio Grande St., El Paso, Tex. (Elected Dec. 15, 1924.) (Age 31. Born Mexico City, Mexico.) 1918 Topographic and Hydr. Engr., and 1920 C. E., National School of Eng., Univ. of Mexico.—Jan. 1919 to Dec. 1920 Instructor of Surveying, Eng. School, Univ. of Mexico.—Dec. 1920 to Nov. 1923 with International Boundary Comm., United States and Mexico, until Jan. 1922 as Surveyor, Mexican Sec., in charge of topographic and hydraulic investigations on Rio Grande, then Asst. Engr. in charge of gauging operations on Rio Grande and surveys on Colorado River, co-operating with U. S. Engrs. *TT 2.9: P 2.9: RC 2.9.*—Nov. 1923 to date Cons. Engr., International Water Comm., in charge of surveys of boundary streams and of design and direction of flood control projects on Rio Grande, co-operating with U. S. Engrs.; also June 1922 to Sept. 1925 Secy., Board of International Waters of Mexico, in charge of office engineering and examination of irrigation projects, and since Jan. 1923 with International Water Comm., 1 year as Acting Commr., Mexico Sec., on discussion, with U. S. Commrs., of distribution of water of international streams between United States and Mexico and since Feb. 1929 Tech. Advisor, directing irrigation, flood control and hydraulic investigations on Rio Grande, Colorado and Tijuana Rivers, co-operating with U. S. Engrs. *TT 7.4: P 7.4: RC 7.4: D 7.4.*—*TT 10.3: P 10.3: RC 10.3: D 7.4.* Refers to C. S. Clark, C. E. Ellsworth, L. C. Hill, L. M. Lawson, E. Mead, J. A. Norris, L. Perez Castro.

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(2) **STARKWEATHER, JOHN BURR**, Jun., 292 Auburndale Ave., Auburndale, Mass. (Elected Dec. 4, 1922.) (Age 31. Born Milwaukee, Wis.) 1922 B. S., Mass. Inst. Tech. *TT 4: P 4.*—Summer 1920 Instrumentman, City of Portland, Me.—June to Nov. 1922 Timekeeper, Instrumentman, Materialman, etc., Hassam Paving Co., on 8-mile job at Westport, Conn. *TT 0.2: SP 0.2.*—Feb. to May 1923 Office Engr. at Richmond, Cal., 1 month with G. L. Miner Co., Contrs., on house erection, streets, sidewalks, etc., then at refinery of Standard Oil Co., on tanks, pressure stills, grading, etc., including erection. *TT 0.1: SP 0.1.*—May to Oct. 1923 Res. Engr. with Stone & Webster, Inc., Ukiah, Cal., adding piers and stop-gates to concrete dam, clearing timber, etc. *TT 0.4: P 0.4: RC 0.4.*—Feb. to Sept. 1924 Res. Engr., Manville Jouckes Co., High Shoals, N. C., on house erection, streets, sewers, water, etc. for mill village. *TT 0.7: P 0.7: RC 0.7: D 0.7.*—Sept. 1924 to July 1927 with Southern Power Co., until Nov. 1926 as Office Engr. at New Catawba Station, Ft. Mill, S. C., on installation of 60 000-kva. 4-unit hydro-electric plant, including dam, steel gates, power house, transmission lines, excavating, etc., then (10 months) Office Engr. at Spencer, N. C., Buck Steam Station, 100 000-kva. 2-unit steam plant, including excavating, concreting, installing equipment, coal-handling, transformer station, etc., and after Nov. 1926 Res. Engr., completing work and putting on line. *TT 2.7: P 2.7: RC 1.7.*—July 1927 to date Vice-Pres., Starkweather & Broadhurst, Inc., Boston, engineering and sale of boilers, heaters, coolers, condensers, turbines, cooling towers, pumps, pumping plants, heat-recovery systems, uniflow and Diesel engines, etc., complete plants or single units. *TT 3.6: P 3.6: RC 2.6: D 2.6.*—*TT 11.7: SP 0.4: P 11.3: RC 5.3: D 2.8.* Refers to H. D. Dewell, F. W. Haley, F. A. Marston, W. D. Shannon, C. T. Wanzer.

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(1) **YOUNG, BRIAN OLIVER, Jun.**, Box 4534, G. P. O., Melbourne, Vic., Australia. (Elected October 10, 1927.) (Age 31. Born Broken Hill, N. S. W., Australia.) 1915-1922 student, Perth (Western Australia) Tech. School and Perth Univ.—Nov. 1916 to Sept. 1919 Jun. Draftsman, Public Works Dept., Perth, Western Australia, architectural drawings and tracings, copying railway survey plans, drawings and estimates for small bridges, etc. *TT 1.5: SP 1.5*.—Sept. 1919 to March 1924 Jun. Draftsman and Draftsman, Metropolitan Water Supply, Sewerage & Drainage Dept., Perth, house connections, plans, estimates, etc.; design of sections for sewers and water mains from field notes; design of reinforced concrete septic tanks, open channels, reinforced concrete piles and large reservoirs. *TT 4: SP 0.5: P 3.5: RC 1.5*.—March 1924 to date with Hume Pipe Co. (Australia), Ltd., Melbourne, as Asst. Engr., Perth Branch and Head Office, Branch Mgr. and Engr., Tasmanian Branch and (at present) Engr., Head Office, in direct charge of construction, laying, jointing, testing, etc. of reinforced concrete and steel water mains, large pipe culverts, sewers, septic tanks, silos and other reinforced concrete precast products; design and construction of plant, buildings and machinery for manufacturing reinforced concrete pipes, etc., concrete lining of steel and cast iron pipes, tests and experimental work. *TT 7.1: P 7.1: RC 7.1—TT 12.6: SP 2: P 10.6: RC 8.6*. Refers to H. E. Bellamy, C. C. Halkyard. (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

*The Board of Direction will consider the applications in this list not less than thirty days after the date of its issue.*